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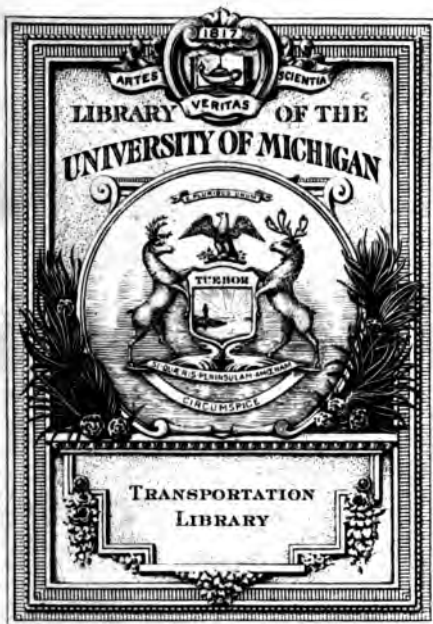
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ON SINGLE TRACK



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# RIGHTS OF TRAINS

ON

## SINGLE TRACK

A COMPLETE EXAMINATION FOR EMPLOYES ON  
THE STANDARD CODE AND OTHER  
RECOMMENDED TRAIN RULES.

BY

**HARRY W. FORMAN**

A TRAIN DISPATCHER OF THIRTY YEARS' EXPERIENCE.  
WHO HAS INSTRUCTED AND EXAMINED  
TEN THOUSAND RAILROAD MEN

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## INTRODUCTION.

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Many of the same general principles that governed the movement of trains thirty-five years ago are in effect today, but the railroad man of that period would indeed be astonished in studying one of the elaborate and theoretically perfect books of rules now in general use, elaborated to facilitate the movement of passengers and freight under constantly increasing demand for more speed and safety and decrease of expense of operation.

From the viewpoint of the person unacquainted with railroad transportation the conductor, engineman or train dispatcher must necessarily be endowed with superhuman strength, nerve and sagacity. Certainly conductors and enginemen are required to be familiar with the handling of property entrusted to them, and must not only fully understand the rules governing them, but must also be conversant with the theory of the rights of trains under such rules. They must also use care and forethought, and in an emergency do the right and safe thing without loss of time in debating the best thing to do. A train dispatcher keeps his mind on his work, using the same good judgment that is displayed by a business man in managing an enterprise of like magnitude, but, aside from this, extraordinary talent is not necessary.

The Standard Code is the railroad man's guide and dependence; without it, he would now be quite helpless. Two cardinal principles govern in framing rules: They must be so worded that they cannot be misunderstood, and a rule which confers superiority upon one train must by so much restrict that of others. When a rule or train order is not understood it must never be construed to

mean safety. A signal imperfectly displayed must never allow the presumption that "proceed" is indicated; trains must stop.

Twenty years ago nearly every railroad had rules and train order forms differing from those of all other roads; each set of operating officials seems to have been convinced that its rules and forms were the only safe and practical ones, and no doubt some of them felt great compassion for other roads that were apparently still in the dark. I distinctly remember feeling sorry for the companies that had not yet discovered the beauty and simplicity of the forms which were in use by our company; but now, when some of those forms are recalled, I am puzzled to understand how any man could have gone so far out of his way to get them.

Up to the time of the formation of the General Time Convention, now the American Railway Association, the language or literary character of train rules had not received careful attention—anything that was safe was good enough. While it was generally conceded that standard rules were desirable and much needed, many doubted whether any set of rules and train order forms could be made that could be applied successfully on different roads. Fortunately the Train Rule Committee which drafted the Standard Code was composed of men of great experience, who quickly decided upon certain basic principles. The Committee fixed upon rules selected from a number of roads as being sufficient and containing the essential features upon which to build a universal code. Much time was devoted to revision, after which a set of rules entitled the Standard Code was submitted to the Association. Notwithstanding many objections, the Association finally accepted the Committee's recommendations with only slight modification, and the Standard Code was gradually adopted. The Code, with sometimes a number of additions, may be found substantially on nearly every road to-day.

Rule 99 is one which cannot be so worded that it will receive the unqualified endorsement of all operating officials. The principle agreed upon is that which is found in

the first four lines of the rule: "When a train stops or is delayed, under circumstances in which it may be overtaken by another train, the flagman must go back immediately with stop signals a sufficient distance to insure full protection." These instructions, as framed by the Committee, if properly carried out, are of themselves enough to prevent collision, and it will be found that no company has added anything to the rule that will in any way clash therewith.

The author is of the opinion that there should be uniformity in spacing torpedoes, as it helps to impart information to the train which is warned. To place one torpedo one-fourth of a mile from the rear of the train, then continue to go back about three-fourths of a mile before attaching two to the rail, will not accomplish much. The engineman ordinarily is then but little better off when the stop-signal is exploded than he would have been had the flagman not gone back beyond it, as he may have attained such speed when the stop-signal is finally given that he cannot stop in time to prevent an accident. If torpedoes are placed upon the rail without reasonable regard for uniformity, quite likely an engineman will be slowed down or stopped unnecessarily, and when the vital point is finally reached he may not have a sufficient supply of air to immediately stop. With cautionary signals every fourth of a mile, he could be under control at all times and could stop quickly when stop was indicated.

Flagmen must not get the impression that any prescribed distance is as far back as they shall go, and the belief that a passenger train is the most difficult to stop is also fallacious. An engine running alone, or a freight train not fully equipped with air, may run much farther than a first-class train with perfect braking power. There is also an erroneous idea with regard to grades: It is not as necessary to go back a mile or so on a three or four per cent. gradient as on one of but one per cent. or less. If, on a four per cent. grade, trains cannot be stopped within a half mile it is doubtful if they can stop at all, while on a light incline a speed of sixty or eighty miles an hour is not uncommon. If flagmen have at hand ten

torpedoes they can go a mile and a quarter, place them uniformly as described and have one left to meet an emergency.

Form "19" orders are now delivered to conductors and enginemen without materially slackening the speed of trains by placing the orders in receptacles attached to wooden hoops. If handled intelligently there can be no serious objection to the practice; but dispatchers should instruct operators when and when not to make the delivery by use of hoops. The practice is especially hazardous on roads where meeting orders are sent to operators at the meeting point. Rule 211 contemplates such orders being delivered without delay, but, to insure safety, trains should reduce speed sufficiently to be able to quickly stop if necessary before overrunning the switch used by trains in the opposite direction.

The word "division" in Code rules is not sufficiently comprehensive to prevent misunderstanding on large roads. A single division may cover the territory between A and E and there be several "districts" within such division. In determining whether or not trains have life, men who run between B and C, for instance, should not be required to consider the date a train leaves A or E, the division terminus; but, rather, date it leaves C or B, the district terminals. Districts only will be referred to in this book. If each district were always treated as a distinct railroad much confusion would be eliminated.

Letters ought to be substituted for the foreign names in Code train-order examples, and the forms should be numbered. A great many men have been known to refrain from questioning an examiner as to the meaning of certain examples because they feared they could not properly pronounce these names. Letters have sequence and would tend to make the examples much clearer and more easily discussed.

An attempt has been made to outline a plan of moving trains safely on single track, indicating what may and may not be done without violation of the principles contained in Code rules. Little consideration has been given to delay; the object aimed at is safety. Rulings should



invariably be made with that idea uppermost when a problem will admit of different understandings.

**BENEFICIAL RESULTS FROM MAINTAINING A PERMANENT BOARD OF EXAMINERS.**

The legal department of a corporation does not earn a dollar, yet it is of inestimable value in guarding interests and saving a company from paying many unjust claims. A board of examiners bears the same relation: It can not be clearly demonstrated that the constant and systematic examination, supervision and checking of employes by a competent board effects a direct saving in operation, because there is little to show that there would have been greater loss through accidents chargeable to misunderstanding or violation of rules had not such a board been maintained.

An elaborate book of rules, framed along the lines set forth by the American Railway Association, is now necessary to successfully operate a railroad, but to expend several thousand dollars in getting out such a book, and a few more thousand at the time the rules take effect in instructing employes who are to be governed by these rules, will not get the full benefit if the matter is then dropped, or instruction and examination be thereafter delegated to local boards who have not been provided with a written examination and ordered to follow it literally.

It has been the experience of most railroad companies that within a year there will creep in a great many different rulings and understandings on each district, and nearly all of the good work of the original board, which was or should have been in close touch with the views of the management, is thus rendered ineffective.

Instruction upon the use of the air-brake is, by many companies, thought to be of sufficient importance to equip a car for the purpose of fully illustrating its workings and to keep an instructor on the road all the time; yet, as Mr. Adams says in his article in the Railroad Gazette, July 18, 1902, entitled "The Superintendent, the Conductor and the Engineer," since published in pamphlet form, and

which the author heartily endorses and earnestly hopes all railroad men will secure and carefully read, instruction upon the air-brake is of minor importance as compared with the uniform understanding and enforcement of train rules which so vitally concern the lives of passengers and employes.

Assistant superintendents, trainmasters and chief train dispatchers do try to see that rules are properly understood and obeyed on their divisions, but they cannot do so regularly and systematically because of other pressing duties demanding a large share of their time.

A board of examiners need not necessarily consist of a train dispatcher, conductor and engineman if a company does not feel that such an expense should be incurred, but there should be at least one competent man permanently employed to supervise all examinations, and he should pass over the system as often as possible to see that his instructions are understood and being observed.

There can be no objection to frankly informing employes that they will be constantly watched and may be subjected to "surprise checking" at any time, to ascertain whether or not they are observing the rules; men who are alert and faithfully performing their duties would receive only just commendation if this were done.

After a book of rules is put into effect, and all interested employes are instructed and examined thereon, the chief examiner should call in all employes at least once a year and re-examine them, to keep them brightened up; and no person should thereafter be engaged without having been given a certificate of qualification by this board. There is no other known way for a company to reap the full benefit from the expense of issuing a book of standard rules.

It is hoped that the reader will weigh the theories and the arguments upon which they are based and give credit as appears to be true in his perhaps wider experience. Nothing has been advised that has not been experimented with and found to be practicable.

March, 1904.

HARRY W. FORMAN.

## **DIRECTIONS FOR EXAMINERS.**

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In the preparation of the following method of examining and instructing railroad employes connected with the train service, the rulings and explanations issued from time to time by the Train Rule Committee of the American Railway Association have been freely used, and, in addition, the author has incorporated his own instructions, suggestions and opinions, based upon a large experience both as dispatcher and examiner. The aim has been to treat exhaustively, and by many practical examples, the different phases of the subjects covered by the Standard Code of Train Rules, with the object of awakening interest and intelligent thought on the part of the employe and impressing upon his mind the fundamental principles upon which the rules are based and upon the knowledge of which their correct application in the handling of trains with safety and dispatch must depend.

Short "lectures" are inserted in the catechism, intended to give additional information and instruction, and in further explanation of the rules, or to bring out points not specially mentioned therein. They may, however, be omitted without materially affecting the efficiency of the examination. The "notes" are for the information of the examiner.

Each subject treated is introduced by quoting the corresponding section or rule of the Standard Code in regular order. It will be noticed that in several cases additions are made to the standard rules. These additions or changes are chiefly in matters of detail or such modifications as special experience may have developed; although not authorized under the Code, they are in use on several

roads, and can be recommended as giving good results in practice.

The person examined must be able to repeat the definitions and Rule 99 verbatim, and must be sufficiently familiar with the hand, flag and lamp signals to be able to give a practical illustration of them. He must memorize the rules for bell-cord, whistle, torpedo and fusee signals, and know when and how to use these signals. Since the real intent is the all important point of the remaining rules, there is no objection to the person examined repeating or explaining them in his own language. The man who states a fact and can demonstrate it, is a better man than one who answers "yes" simply because he has been taught that "yes" is the correct answer. This is why percentage examinations are sometimes unsatisfactory. Nothing below 95 per cent. should be regarded as satisfactory; but in deciding on the percentage attained there should be taken into consideration the employe's experience and general intelligence, his knowledge of the theory of the rules, and his education. Each person in the class should be asked a question in his turn, and if any one should miss and the others fail to correct, a miss should be charged against all. This has the effect of holding attention. In addition to this general examination questions should be asked as to the number of the present time-table, special instructions therein, and other local matters covered by bulletin or established by long usage.

There should be an application for a record of examination (See Appendix, Form 50) to be used in connection with the examination. This should be filled out in the presence of the examiner, to prove that the applicant can write. Certificates (See Form 51) are given to those who pass a satisfactory examination. If an applicant should receive 100 per cent. it would be a deserved compliment to him to have the fact endorsed on his certificate; but should he fail to attain that high degree of proficiency the actual percentage need not be stated.

Employes, when examined, are required to read the Charts, thus proving not only that they can read, but that their eyesight is good: The print on the charts should be just large enough to be conveniently read by persons whose vision is normal. Requiring the men to

select and name the colors corresponding to the colors of the signal flags in daily use will be likely to reveal any evident case of color blindness, while deafness can be easily detected. The men may also be asked to show their book of rules, their copy of the current time-table, and their watches.

The examiner should carefully question the applicant until satisfied that the rights of trains under the different rules and train order complications are fully understood. Such questions as are not applicable may, of course, be omitted. Often an examination may be made more impressive by calling up, by way of illustration, some local incident where failure to comply with the rules has resulted in accident or delays, or where a lack of knowledge of them has caused confusion and misunderstanding.

In conducting the examination it is recommended to make use of white card-board charts, 22 inches x 28 inches in size, with black letters sufficiently large to be read at a distance of 30 feet; also a white board, 36 inches x 48 inches in size, painted like Chart No. 1, which represents a district. No. 1 and No. 2 are first-class trains; No. 15 and No. 16 are second-class. Even numbers designate trains of superior direction. Different colored lettering may be used to more clearly distinguish the several examples. If an examiner is always to be located on one district, he should arrange the station names and train numbers to correspond with his local surroundings, as the men grasp an idea much more readily when familiar illustrations are used. The rules should be pasted in a book, and then such questions as are pertinent inserted below or at one side, omitting such questions as are not applicable. All questions should be numbered, and, if desired, the numbers of the questions which the person under examination fails to answer satisfactorily may be endorsed upon his application.

Examinations are conducted as follows: A coach is provided and fitted up with an office in one end and a raised platform for the examiners' seats. The necessary charts, blackboards and other appliances should be at hand, including an air-whistle or electrical "buzzer," to be used in teaching the correct manner of sounding the steam engine whistle.

A class of four conductors or enginemen, one dis-

patcher, one or two operators, two brakemen and two firemen should be called to meet at 8 o'clock each morning, and the entire day spent in going over the rules with them.

Employes whose duties are practically the same should be given the same examination, grouping them somewhat as follows:

(1) Dispatchers, operators, conductors, enginemen, yardmasters and yard foremen, who sometimes perform conductor's duty, should be examined on all code rules and such special rules as affect the safety of trains, or prescribe their duties.

(2) Firemen, brakemen, flagmen, train-porters, train baggagemen, switchmen and hostlers should be examined upon code rules affecting the safety of trains and the special rules pertaining to their duties.

(3) Bridge and section foremen and watchmen should be examined upon all code rules in which they are concerned, as well as the rules affecting the safety of trains and which refer particularly to their duties.

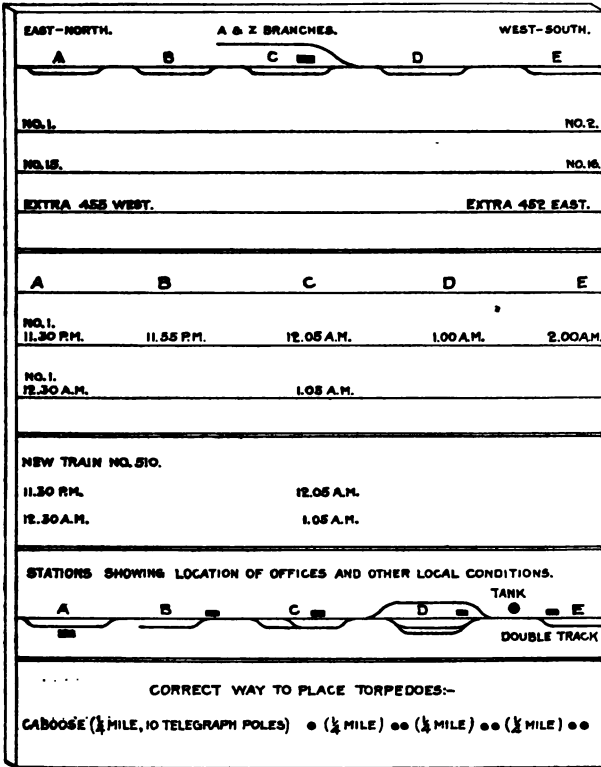
Every employe should be required to read the entire book of rules through a sufficient number of times to become familiar with its contents.

If the examiner will require those who pass to sign their certificates in his presence, before leaving the car, delivery will be facilitated and the possibility of forgery prevented.

Assistant Superintendents, Trainmasters, Chief Train Dispatchers, Master Mechanics, Roadmasters and Superintendents of Bridges and Buildings should attend as many sessions as possible; and after an employe has passed a satisfactory examination he should be urged to attend future meetings whenever his duties will permit it.

CHART No. 1.

← SUPERIOR DIRECTION.





1234



# RIGHTS OF TRAINS

ON

## SINGLE TRACK

### GENERAL NOTICE.

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To enter or remain in the service is an assurance of willingness to obey the rules.

Obedience to the rules is essential to the safety of passengers and employes, and to the protection of property. The service demands the faithful, intelligent and courteous discharge of duty.

To obtain promotion, capacity must be shown for greater responsibility.

Employes, in accepting employment, assume its risks.

NOTE.—Employes may be examined upon the General Notice, if desired, and in connection with the last paragraph attention may be called to special rules or warnings.

#### FORM OF ORDER FOR PUTTING RULES IN EFFECT.

The rules herein set forth govern the railroads operated by the ..... Company. They take effect ....., ....., superseding all previous rules and instructions inconsistent therewith.

Special instructions may be issued by proper authority.

(Name) .....

(Title) .....

\* \* \*

*Question Number 1. The book says: "Special instructions may be issued by proper authority." Should there be time-table special instructions, conflicting with the book of rules, which will govern?*

ANSWER. Time-table special instructions.

*Question Number 2. Should there be foot-notes on certain pages of time-tables conflicting with the special instructions elsewhere in time-tables, which will govern?*

ANSWER. The foot-notes.

*Question Number 3. Should there be bulletin instructions issued superseding or modifying any of the above, what must be understood?*

ANSWER. Bulletin instructions must be respected and take precedence. Rules or instructions in conflict therewith, either in the book or time-table, are thereby suspended.

NOTE.—Bulletin instructions affecting a time-table expire with the time-table. But to avoid misunderstanding all such bulletins should begin with the words "During the life of time-table No. ...."

## DEFINITIONS.

---

**TRAIN.**—An engine, or more than one engine coupled, with or without cars, displaying Markers.

**REGULAR TRAIN.**—A train represented on the time-table. It may consist of Sections.

**SECTION.**—One of two or more trains running on the same schedule displaying signals or for which signals are displayed.

**EXTRA TRAIN.**—A train not represented on the time-table. It may be designated as—  
Extra—for any extra train, except work extra;  
Work extra—for work train extra.

**SUPERIOR TRAIN.**—A train having precedence over other trains.

A train may be made superior to another train by **RIGHT, CLASS** or **DIRECTION**.

**RIGHT** is conferred by train order; **CLASS** and **DIRECTION** by time-table.

**RIGHT** is superior to **CLASS** or **DIRECTION**. **DIRECTION** is superior as between trains of the same class.

**NOTE.**—Superiority by direction is limited to single track.

**TRAIN OF SUPERIOR RIGHT.**—A train given precedence by train order.

**TRAIN OF SUPERIOR CLASS.**—A train given precedence by time-table.

**TRAIN OF SUPERIOR DIRECTION.**—A train given precedence in the direction specified in the time-table as between trains of the same class.

**TIME-TABLE.**—The authority for the movement of regular trains subject to the rules. It contains the classified schedules of trains with special instructions relating thereto.

**SCHEDULE.**—That part of a time-table which prescribes the class, direction, number and movement of a regular train.

**MAIN TRACK.**—A principal track upon which trains are operated by time-table, train orders or by block signals.

**SINGLE TRACK.**—A main track upon which trains are operated in both directions.

**DOUBLE TRACK.**—Two main tracks, upon one of which the current of traffic is in a specified direction, and upon the other in the opposite direction.

**CURRENT OF TRAFFIC.**—The direction in which trains will move on a main track, under the rules.

**STATION.**—A place designated on the time-table by name, at which a train may stop for traffic; or to enter or leave the main track; or from which fixed signals are operated.

**SIDING.**—A track auxiliary to the main track for meeting or passing trains, limited to the distance between two adjoining telegraph stations.

**FIXED SIGNAL.**—A signal of fixed location indicating a condition affecting the movement of a train.

**NOTE.**—A "Fixed Signal" covers such signals as slow boards, stop boards, yard limits, switch, train order, block, interlocking, semaphore, disc, ball or other means for indicating stop, caution or proceed.

**YARD.**—A system of tracks within defined limits provided for the making up of trains, storing of cars and other purposes over which movements not authorized by time-table or by train order, may be made, subject to prescribed signals and regulations.

**YARD ENGINE.**—An engine assigned to yard service and working within yard limits.

**PILOT.**—A person assigned to a train when the engineman or conductor, or both, are not fully acquainted with the physical characteristics, or running rules of the road, or portion of the road, over which the train is to be moved.

*Question Number 4. What is a train?*

**ANSWER.** An engine, or more than one engine coupled, with or without cars, displaying markers; and the men in responsible charge.

*Question Number 5. If an engine is met with markers displayed, but without cars, has a train been met?*

**ANSWER.** Yes.

*Question Number 6. If an engine and cars are met, engine at the front, caboose at rear, but no markers displayed, has a train been met?*

**ANSWER.** No; that is, not an entire train, as defined by the rules.

*Question Number 7. If cars are met with markers displayed on the rear car, but without an engine attached, has a train been met?*

**ANSWER.** Not unless the engine's absence is satisfactorily accounted for by the men in responsible charge. Two things are necessary to constitute a train besides the men in charge of it:—an engine and markers.

*Question Number 8. What is a regular train, and may it consist of sections?*

**ANSWER.** A train represented on the time-table is a regular train. It may consist of sections.

*Question Number 9. What is a section?*

ANSWER. One of two or more trains running on the same schedule, displaying signals, or for which signals are displayed.

*Question Number 10. Can there be only one section of a train?*

ANSWER. No.

*Question Number 11. What is an extra train; how may it be designated?*

ANSWER. A train not represented on the timetable is an extra train. It may be designated either as "extra"—for any extra train, except a work extra; or as "work extra"—for work-train extra.

*Question Number 12. May a train be run as a "special"?*

ANSWER. No. Extra trains may be described as officer, passenger, preferred, etc.; but the word "special" is not authorized and must not be used.

*Question Number 13. What is a superior train?*

ANSWER. A train having precedence over other trains.

*Question Number 14. How may a train be made superior to another?*

ANSWER. By right, class or direction.

*Question Number 15. How is right conferred?*

ANSWER. By train order.

*Question Number 16. Have trains time-table rights?*

ANSWER. No. Trains have precedence conferred

upon them by time-table. Wherever in the rules "right" is referred to as being conferred, it means something that is given to a train by train order. Without a train order there is no "right."

*Question Number 17. How are class and direction conferred?*

ANSWER. By time-table.

*Question Number 18. To what is "right" superior?*

ANSWER. To class or direction.

LECTURE. Naturally so. There is a limit beyond which class and direction cannot operate; but right is unlimited in its application. An extra train may be made superior to a first-class train by train order, thus giving it superior right.

*Question Number 19. What is a train of superior right?*

ANSWER. A train given precedence by train order.

*Question Number 20. Give an example.*

ANSWER. "Extra 455 west has right over No. 2, A to E"; or any train order which makes one train superior to another, or which arrests, reverses, or takes away from a train its authority to run, and confers it upon another train or trains.

LECTURE. Railroad-men's definition of the word "precedence" is "authority to move ahead of or against other trains."

*Question Number 21. What is a train of superior class?*

ANSWER. A train given precedence by time-table.

*Question Number 22. Give an example?*

ANSWER. First-class trains are superior to second class.

*Question Number 23. What is a train of superior direction?*

ANSWER. A train given precedence in the direction specified in the time-table, as between trains of the same class.

*Question Number 24. Can there be superiority by direction on double track?*

ANSWER. No. It is limited to single track.

*Question Number 25. What is a time-table?*

ANSWER. The authority for the movement of regular trains subject to the rules. It contains the classified schedules of trains, with special instructions relating thereto.

*Question Number 26. What is a schedule?*

ANSWER. A schedule is that part of a time-table which prescribes the class, direction, number and movement of a regular train.

*Question Number 27. What is meant by "movement"?*

ANSWER. The manner of moving a train, as to its destination, station-stops and its time of leaving or arriving at stations, and with reference to connecting with, meeting or passing other trains.

*Question Number 28. Does "schedule" embrace anything not enumerated above?*



ANSWER. Schedule also prescribes for each train the days it shall run, and may by signs refer to the stations at which it shall stop regularly, or upon flag, special instructions or information.

LECTURE. When "schedule" is taken or lost, as prescribed by Rules 4, 82 and 94, the train thus affected receives or loses (as the case may be) right, class, direction, number, movement and authority to use certain tracks, run on certain days, make certain stops, and proceed at a certain speed.

*Question Number 29. What is a main track?*

ANSWER. A principal track upon which trains are operated by time-table, train orders or by block-signals.

*Question Number 30. What is a single track?*

ANSWER. A main track upon which trains are operated in both directions.

*Question Number 31. What is double track?*

ANSWER. Two main tracks, upon one of which the current of traffic is in a specified direction, and upon the other in the opposite direction.

*Question Number 32. What is the meaning of "current of traffic"?*

ANSWER. The direction in which, under the rules, a train will move on a main track.

*Question Number 33. If a train were ordered to run extra on double track, which track must it use?*

ANSWER. It must run with the current of traffic.

*Question Number 34. How must a work extra move on double track?*

ANSWER. In the absence of instructions to the contrary, it must move with the current of traffic; never against it.

*Question Number 35. What is a station?*

ANSWER. A place designated on the time-table by name, at which a train may stop for traffic; or to enter or leave the main track; or from which fixed signals are operated.

*Question Number 36. What is a siding?*

ANSWER. A track auxiliary to the main track for meeting or passing trains, limited to the distance between two adjoining telegraph stations.

*Question Number 37. Are there other side-tracks?*

ANSWER. Yes, but the rules deal chiefly with the tracks used for meeting or passing trains, and known as "sidings." There may be storage, city, house, business or other side-tracks, which are also treated as sidings if regularly used to meet or pass trains, or where sidings are not provided, in which case custom or special instructions must determine which switches are the initial switches at that station.

*Question Number 38. What is a fixed signal?*

ANSWER. A signal of fixed location indicating a condition affecting the movement of a train. A "fixed signal" includes such signals as slow-boards, stop-boards, "yard-limits" signs, switch, train-order, block, interlocking, semaphore, disc, ball or other signals or means for indicating "stop," "caution" or "proceed."

LECTURE. Fixed signals are not answered by

two short blasts of the steam whistle; trains stop, proceed under control or at normal speed as the signal indicates. Torpedoes, fusees, stop or caution flags or lamps, on or near the track, and green signals near the head-lights of engines are not fixed signals, and should be answered by whistle the same as if given by a person by hand, flag or lamp. Markers, numbers on bridges, mile or station boards, and white signals on engines also are not fixed signals defined by the rules, but as they do not indicate stop, caution or proceed, they must not be answered by whistle. Whistling-posts are not fixed signals; they are located at designated places, and their use is specially prescribed by Rule 31. Certain signs may be treated as whistling-posts, if so ordered.

*Question Number 39. What is a yard?*

ANSWER. A system of tracks within defined limits provided for the making up of trains, storing of cars and other purposes over which movements not authorized by time-table or by train order may be made, subject to prescribed signals and regulations.

*Question Number 40. What is a yard engine?*

ANSWER. An engine assigned to yard service and working within yard limits.

*Question Number 41. Do yard engines require train orders to work within yard limits?*

ANSWER. No. The definition of a yard provides for their working without orders.

*Question Number 42. May all engines having work to do within yard limits assume that they may occupy the main track without protecting?*

**ANSWER.** No. There is no Code rule providing for movements on main track within yards. When special rules are so worded as to permit yard engines to work on the main track within yard limits without protecting against certain classes of trains, only regularly assigned yard engines may do so. In the absence of such provision, the main track must not be occupied, even by assigned yard engines, without protection.

*Question Number 43. What is a pilot?*

**ANSWER.** A person assigned to a train when the engineman or conductor, or both, are not fully acquainted with the physical characteristics, or running rules of the road, or portions of the road, over which the train is to be moved.

*Question Number 44. If the pilot is himself an engineman and the engineman belonging regularly with the engine is not acquainted with the road, who must run the engine?*

**ANSWER.** The pilot.

*Question Number 45. Where must the pilot ride?*

**ANSWER.** On the engine.

**LECTURE.** The pilot must have copies of all train orders and clearances; if an engineman, he must also have a copy of Form 52 (See Appendix), where such form is used. He is equally responsible with the conductor and engineman of the train for its safety. In many cases he becomes entirely responsible; but as he must remain on the engine, it is the duty of the conductor to see that the rear is protected.

## STANDARD TIME.

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1. Standard Time obtained from ..... observatory, ....., will be telegraphed to all points from designated offices daily at 11:00 a. m., Central time. ....time will govern all trains on all districts of the .....
2. Watches that have been examined and certified to by a designated inspector must be used by trainmasters, conductors, enginemen, train baggagemen, flagmen, brakemen, train porters, firemen, yard masters, switch-engine foremen, round-house foremen, hostlers, roadmasters, section and bridge foremen; and at stations where standard clocks are not located, by train dispatchers, agents and operators. The certificate in prescribed form must be renewed and filed with ..... not later than the 15th of January, April, July and October.

In addition to the quarterly inspection, conductors and enginemen must have the performance of their watches recorded weekly, on form provided and in the manner prescribed.

(Form of Certificate.)

### CERTIFICATE OF WATCH INSPECTOR.

This is to certify that on ..... 19....  
the watch of.....  
employed as .....  
on the ..... Railroad, was examined  
by me. It is correct and reliable, and in my judgment

will, with proper care, run within a variation of thirty seconds per week.

Name of Maker.....  
 Brand .....  
 Number of Movement.....  
 Open or hunting case.....  
 Metal of case.....  
 Stem or key winding.....

Signed,

.....

Inspector.

Address .....

3. Watches of conductors and enginemen must be compared, before starting on each trip, with a clock designated as a standard clock. The time when watches are compared must be registered on a prescribed form.

\*3 (A). Conductors and enginemen who have not access to a standard clock must compare watches daily with those of conductors or enginemen who have Standard Time.

*Question Number 46. What is Standard Time, how many standards are used in the United States, and which standard governs on this road?*

ANSWER. Standard Time is the time adopted by the railroads (Nov. 18, 1883), and now in general use in the United States. There are four standards—Eastern, Central, Mountain and Pacific. .... standard is used on this road.

*Question Number 47. Do all clocks used by this company indicate the standard time it is using?*

ANSWER. Unless a clock is designated as a Standard Clock, either by having these words upon

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\*Letters A, B, C, etc., indicate that such rules are not Standard Code.

its face, or by special written or printed instructions, it must not be understood to correctly show Standard Time.

*Question Number 48. What kind of watches must be used, and by what classes of employes?*

ANSWER. Watches that have been examined and certified to by a designated inspector must be used by trainmasters, conductors, enginemen, train baggagemen, flagmen, brakemen, train porters, firemen, yardmasters, switch-engine foremen, round-house foremen, hostlers, roadmasters, section and bridge foremen; and at stations where there are no standard clocks, by train dispatchers, agents and operators.

*Question Number 49. How often must these watches be inspected, and with whom must the certificate be filed?*

ANSWER. They must be inspected quarterly and a certificate in prescribed form must be filed with the superintendent not later than the 15th of January, April, July and October.

*Question Number 50. What employes are required to have the performance of their watches recorded weekly, and by whom must the record be made?*

ANSWER. Conductors and enginemen must have the performance of their watches recorded weekly by an inspector or other designated person, on form provided, which varies materially on different roads.

*Question Number 51. When must conductors and enginemen and other designated train employes, compare their watches with a standard clock?*

ANSWER. Within a reasonable time before starting on each trip.

*Question Number 52. What record must conductors and enginemen make of their having done so?*

ANSWER. They must register the time when compared in the column designated for that purpose in the train register, or on form provided. (See Appendix, Form 53, which is recommended for adoption.)

*Question Number 53. Should conductors and enginemen be so situated that they cannot compare with a standard clock before starting on a run, or on a work train, after laying up over night, how must they obtain standard time?*

ANSWER. From the train dispatcher, or from some conductor or engineman who has standard time; they may flag a train to get it if absolutely necessary, or if their watch stops at any time.

*Question Number 54. With whom must the engineman compare time, and when?*

ANSWER. With the conductor and fireman, before starting on each trip.

*Question Number 55. With whom must conductors compare time, and when?*

ANSWER. With each of their enginemen before starting on each trip, and with their trainmen as soon thereafter as is practicable. There is no objection to comparing with their trainmen before starting, if convenient, but it is not necessary to delay the train to do so.



*Question Number 56. In consulting watches to obtain the time, which hand should be first observed?*

ANSWER. The second hand, to note if the watch is running.

NOTE.—Code rules require only conductors and enginemen to have standard watches. Other employes may be also included if thought necessary. As operators are constantly handling time orders or time-limit orders, they also should be required to have watches showing the correct time. If firemen and brakemen are required to read train orders and to note if properly executed, they should carry watches regulated to standard time. On some roads train-porters are also flagmen and brakemen.

## TIME-TABLES.

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4. Each Time-table, from the moment it takes effect, supersedes the preceding Time-table. A train of the preceding Time-table shall retain its train orders and take the schedule of the train of the same number on the new Time-table.

A train of the new Time-table which has not the same number on the preceding Time-table shall not run on any district until it is due to start from its initial station, on that district, after the Time-table takes effect.

LECTURE. Possibly this rule is not always as clearly understood as it might be, if more carefully studied. The first thing to determine is whether or not a train is "a train of the preceding time-table." To be such, evidently it must be due on the road when the new time-table takes effect; it is not essential, however, that it should actually be on the road at the time of the change. If delayed, it is still a train of the preceding time-table, even though it did not start by the old time-table. It then takes the new schedule at its initial station, instead of at some intermediate station. But a train of the old time-table which has lost right and class, or is annulled, is not a train of any time-table. A change of time that would make a train run twelve hours

later than its old time would not permit the train, even though on the road, to assume the new schedule. A train due to leave its initial station at 12.30 a. m. on the old time-table, and at 11.30 p. m. on the new cannot start until 11.30 p. m. after the new time-table takes effect, because it is not "a train of the preceding time-table"; since it is not yet on the road, nor is it due.

Each district must be treated as a separate railroad. Train No. 1 may, upon a new time-table taking effect, assume the schedule and run to its next initial station, but it does not always follow that such train may go farther. It may be due to arrive there at 12.30 a. m. and due to leave at 11.30 p. m., as cited above.

There is no authority for the assumption that there must be a No. 1 leave its initial station daily, or that there cannot be two trains of the same number leaving within twenty-four hours. Should No. 1 leave its initial station at 1 a. m. and reach its destination at 6 a. m., and a new time-table go into effect at 12 o'clock noon, say on Monday, scheduling a No. 1 to leave the same initial station at 10 p. m., it could hardly be insisted that "another No. 1" could not be properly started at 10 p. m. under the new time-table; so far as the starting of a train is concerned, the Monday of the old time-table, up to 12 noon, is as much separated from the Monday of the new time-table, *after* 12 noon, as it is from the Monday of the previous week or month or year. During the first twenty-four hours after the change of time under that form (B) of the rule selected for discussion, which is the one generally preferred, the operation of the road may occasionally be some-

what clouded, and it is the province of the train dispatcher to make everything clear, by annulling trains or issuing such other instructions as may be necessary to avoid delay and misunderstanding, and to ensure the smooth and satisfactory working of the new time-table.

*Question Number 57. What effect does a new time-table have upon an old one?*

ANSWER. It supersedes—that is, takes the place of—the old time-table.

*Question Number 58. When a new time-table takes effect, how does it affect regular trains that may be on the road, or are due to be on the road, and what orders must such trains retain and respect?*

ANSWER. Regular trains of the preceding time-table must take the schedule of the train of the same number on the new time-table, and must retain, execute and respect all train orders addressed to, or affecting, such train.

*Question Number 59. In the absence of train orders, how must trains proceed against superior regular trains, after the new time-table takes effect?*

ANSWER. They must go to any station that they can make and properly clear the time of superior regular trains, as shown by the new time-table.

*Question Number 60. If shown as a first-class train on the old time-table and second-class on the new, what class of train would it be, after the new time-table went into effect?*

ANSWER. Second-class.

*Question Number 61. If a first-class train on the old time-table and second-class on the new, what must be understood with regard to any train orders that may have been issued for such train while running as a first-class train?*

ANSWER. It must retain and respect all train orders until fulfilled, unless superseded or annulled. Orders are addressed to trains; class is not considered. If it had orders to run an hour late, it must continue to run one hour later than the new time.

*Question Number 62. If a train is a daily train on the old time-table, and a new time-table takes effect at 12.05 a. m., Sunday, showing such train as daily, except Sunday, and such regular train is on the road running as per the old time-table, may it proceed to its next initial station, or district terminal?*

ANSWER. Yes. It takes the schedule and proceeds, notwithstanding the new time-table prescribes that it will not run Sundays thereafter. On that particular Sunday it may complete its run under protection of that part of Rule 4 which says, "a train of the preceding time-table shall retain its train orders and take the schedule of the train of the same number on the new time-table." Thereafter, the train will start daily, except Sunday.

LECTURE. It is evident that a train that has once been authorized to start should be expected to reach its destination, unless otherwise ordered, and that, if its schedule appears on the new time-table at all, it may lawfully assume the same and consider it as an order to complete its entire movement. such or-

der taking precedence of the order to run on certain days only. The train must, of course, run by the new schedule when the new time-table takes effect—running late, if its time is set ahead, or waiting at the next station if its time is set back. There may arise, however, some doubt as to its status if the new time-table has a separate schedule for Sunday trains, on which its own schedule would not appear at all. The better way in all doubtful cases would be to issue a special bulletin with the new time-table defining the movement of all trains whose schedule laps over from the old to the new time-table. In the absence of such instructions, dispatchers should send out such orders as will remove all cause for misunderstanding and so expedite train movements until all trains started under the old time-table have completed their run.

*Question Number 63. If a new time-table were to show a train four hours ahead of its old time, what must it do after the new time-table takes effect?*

ANSWER. In the absence of train orders to run extra, it must wait at some station until due to leave by the new time-table, and must respect the new time thereafter. In practice, however, the train would probably be run extra or as a section of some overdue train, and not be allowed to wait.

*Question Number 64. If the time is so changed that a train will be caught between stations ahead of time, what must be done?*

ANSWER. It must wait at some station at which it is due by the old time-table until the new time-

table takes effect; then, in the absence of train orders, it must leave such station on the new time.

*Question Number 65. If a train is due at a station at 11.55 p. m. by the old time-table, and the new time-table shows it to be due there at 9.55 p. m., what may be done after the new time-table takes effect?*

ANSWER. The train is then two hours late. It may recover the time if practicable.

*Question Number 66. When a new time-table is received by employes in the train service, what should be one of their first duties in regard to it?*

ANSWER. The new time-table should be carefully studied and checked before it takes effect, so that those in charge may avoid being caught between stations on the time of a superior train, should its time be shown earlier on the new time-table.

*Question Number 67. If, under the old time-table, a train were instructed to run two hours late, how must the order be understood after the new time-table takes effect?*

ANSWER. It must run two hours later than its new time.

*Question Number 68. If, before a new time-table takes effect, orders were issued making a train inferior to an extra or regular train, or conferring right upon it, how must the orders be understood after the new time-table is in effect?*

ANSWER. The orders remain unaffected, except that such parts of orders as refer to a regular train which has no schedule on the new time-table become void after the new time-table has taken effect.

*Question Number 69. When a new time-table takes effect should the change give a train time enough to meet an opposing train and clear its new time at a station beyond the meeting point fixed by train order, may it do so?*

ANSWER. No; it has no right to advance beyond the meeting point named in the train order.

*Question Number 70. Suppose No. 1 were due to leave A at 11.30 p. m. by the old time-table, and that it left on time, and a new time-table takes effect at 12.05 a. m., scheduling No. 1 to leave A, its initial station, at 12.30 a. m., can another No. 1 be started from A at 12.30 a. m.?*

ANSWER. No, for the reason that the rule prescribes that the No. 1 which left its initial station at 11.30 p. m. must take the schedule of the train of the same number on the new time-table.

*Question Number 71. May another No. 1 be run from its initial station on the new time to the point where No. 1 of the preceding time-table takes the schedule?*

ANSWER. No.

*Question Number 72. May the dispatcher authorize No. 1 leaving at 11.30 p. m. to display signals and start a second section of this train on the new time (12.30 a. m.) from its initial station?*

ANSWER. Yes.

*Question No. 73. If No. 1, due to leave at 11.30 p. m., is delayed and is not ready to leave its initial station until after the new time-table takes effect, may such train start on the new time, assuming the*



*schedule at the initial station as it would have been done if on the road?*

ANSWER. Yes; there is no difference. It is a train of the preceding time-table.

*Question Number 74. If an opposing inferior train meets No. 1 under the old time-table, but is unable to reach the initial station by 12.30 a. m., at which time No. 1 is scheduled to leave by the new time-table, must it clear No. 1 due to leave at 12.30 a. m., or receive orders against it?*

ANSWER. Having regularly cleared No. 1 of the old time-table (which left at 11.30 p. m.), whether meeting it on its old or its new time, and knowing that old No. 1 has now become new No. 1 and taken its schedule, the inferior train is not obliged to clear any other No. 1 (supposed to leave at 12.30 a. m.), or to receive orders against it, but must clear new No. 1's time until met; that is, it has but *one* No. 1 to clear and meet.

LECTURE. It is clear that the No. 1 which left at 11.30 p. m. must take the schedule of No. 1 when the new time-table takes effect; therefore, in this particular case, the No. 1 due to leave at 12.30 a. m. by the new time-table must not be allowed to run, as its schedule has been taken from it and this would cause two No. 1s to be on the road at the same time within an hour of each other. This is one of those perplexing problems for which no rule can be given, as there may be a difference of many hours in the two schedules, or the time-table may be effective from noon, instead of midnight; and as such complication is not likely to occur often,

it would be better for the dispatcher to annul such train, when possible, or help the few trains needing help to reach the terminal against the time as shown on the new time-table. But if the train is running, as per the old time-table, it must assume the schedule of the new time-table train of the same number, and such schedule must not be given to any other train.

*Question Number 75. If a train were waiting for No. 1, as per the old time-table, and it failed to arrive by 12.05 a. m., at which time a new time-table would take effect, how should the waiting train then proceed against it?*

ANSWER. It might go to any station that it could make and properly clear No. 1's new time, as shown on the new time-table, unless held by train order, as No. 1 must not run in advance of its new time.

*Question Number 76. But suppose No. 1 had left a station on time by the old time-table, and the new time-table should become effective before it could reach another station, on account of an accident or obstruction, would not this cause the trains to meet between stations, if by new time-table No. 1's time is made, say, an hour later?*

ANSWER. In such event No. 1 is between stations ahead of time and must protect itself. Other trains are not required to take this into consideration in proceeding against No. 1 on its new time.

*Question Number 77. If the first section of No. 1 is met under the old time-table, by an opposing inferior train, how may the latter proceed against*

*the second section after the new time-table takes effect?*

ANSWER. It may go to any station that it can make and properly clear No. 1's time as shown on the new time-table, as all sections of No. 1 must run on the new time after the new time-table takes effect.

*Question Number 78. Reverse the proposition. On the old time-table, No. 1 is due to leave its initial station at 12.30 a. m., and on the new time-table it is due to leave at 11.30 p. m., the new time-table taking effect at 12.05 a. m.; may No. 1 leave immediately after the new time-table takes effect, upon the theory that the train is then thirty-five minutes late?*

ANSWER. No. No. 1 must not then run until due to leave after the new time-table takes effect; not for twenty-three hours and twenty-five minutes afterward, as, in such case, No. 1 is not a train of the preceding time-table; for it is not on the road or overdue at the time the new time-table went into effect. The train may only start on its new time, 11.30 p. m.

*Question Number 79. If, in the case above cited, No. 1 were on the road, may it take the schedule and proceed?*

ANSWER. There could not be a No. 1 on the road, not yet being due to leave its initial station; and the No. 1 which left some twenty-four hours before would either have reached its destination on that district or have lost right and class.

*Question Number 80. If, in this case, a train were out on the road waiting for No. 1 because unable to reach No. 1's initial station by 12.30 a. m., how would this opposing inferior train proceed after the new time-table took effect?*

ANSWER. In the interest of safety, inquiry should be made as to the whereabouts of No. 1, but there would be nothing to prevent the opposing train from proceeding against No. 1 until 11.30 p. m. with the understanding that No. 1 could not run for twenty-three hours and twenty-five minutes after the new time-table had superseded the old.

*Question Number 81. May a train which has lost right and class by the old time-table assume its new schedule and make its run, if by the new time-table its time is so changed as to allow it to do so and still be less than twelve hours late?*

ANSWER. No; and the dispatcher cannot authorize the movement. The train went out of existence before the new time-table took effect, and is in no sense "a train of the preceding time-table." Once dead, always dead.

*Question Number 82. When may a new train be understood to have authority to begin its run on a given district?*

ANSWER. When it is due to leave its initial station, after the new time-table takes effect.

*Question Number 83. May such new train be started from an intermediate station where the time is shown for it, before it has become due at such point after having left its initial station on time?*

ANSWER. No; it must first make its run from its initial station.

*Question Number 84. May the train dispatcher issue a train order for another train out on the road to assume the schedule of the new train, before such train is due at the intermediate station, after having left its initial station on time?*

ANSWER. No; the dispatcher has not the power to create a regular train not authorized by rule to be on the road. He must not attempt to run the new train until it is due at the station where he wants to use it, after having left its initial station on its schedule.

*Question Number 85. A new train is due to leave its initial station at 11.30 p. m., and the new time-table authorizing it takes effect at 12.05 a. m.; when may such train run?*

ANSWER. It may start on its time. That is, in this case, in twenty-three hours and twenty-five minutes after the new time-table is in effect.

*Question Number 86. When may it run, if due to leave at 12.30 a. m.?*

ANSWER. The train may start from its initial station twenty-five minutes after the new time-table takes effect.

*Question Number 87. How would an inferior train be governed with respect to a new train?*

ANSWER. It would disregard it until after the new train is due to leave its initial station, and then clear it at any station it can make in season to do so.

5. Not more than two times are given for a train at any station; where one is given, it is, unless otherwise indicated, the leaving time; where two, they are the arriving and the leaving time.

Unless otherwise indicated, the time applies to the switch where an inferior train enters the siding; where there is no siding it applies to the place from which fixed signals are operated; where there is neither siding nor fixed signal, it applies to the place where traffic is received or discharged.

Schedule meeting or passing stations are indicated by figures in **full-faced type**.

Both the arriving and leaving time of a train are in full-faced type when both are meeting or passing times, or when one or more trains are to meet or pass it between those times.

Where there are one or more trains to meet or pass a train between two times, or more than one train to meet a train at any station, attention is called to it by a dash under the figures thus: **5:45**.

When a train takes a siding, extending between two adjoining telegraph stations, to be met or passed by one or more trains, the time at each end of the siding will be shown in full-faced type.

*Question Number 88. Where only one time is given for a train at a station, which time is it?*

ANSWER. The leaving time, unless otherwise indicated.

*Question Number 89. Where two are given, which are they?*

ANSWER. The arriving and the leaving time.

*Question Number 90. Where is the exact point at a station to which it is to be understood that time applies?*

ANSWER. The time applies to the switch where an inferior train is to enter the siding; where there

is no siding, it applies to the place from which fixed signals are operated; where there is neither siding nor fixed signal, it applies to the place where traffic is received or discharged.

NOTE.—The rule reads, “unless otherwise indicated.” As this exception has provoked adverse criticism and seems unnecessary, it will not be considered.

*Question Number 91. If a train is running, say, an hour late, or holds an order to wait for a train at a station until a certain time, must it run late from train-order signal to train-order signal, or wait at the station-building until the train has been met or the time has expired?*

ANSWER. The train runs late from the switch where opposing trains must enter the siding, or waits at such switch.

*Question Number 92. When and where should an inferior train clear such train's time?*

ANSWER. It must clear it as prescribed by rule, at the initial switch of the siding.

*Question Number 93. When may a train carrying passengers leave the station-building or other point where passengers are received or discharged?*

ANSWER. It may not leave the place where passengers take or leave the train, in advance of its time-table time, to pull down to the switch that inferior opposing trains must use in taking the siding.

*Question Number 94. How are meeting and passing points indicated on time-tables?*

ANSWER. By figures in full-faced type.

*Question Number 95. When both the arriving and leaving time of a train are in full-faced type, what is meant?*

ANSWER. Both are meeting or passing times, or one or more trains are to meet or pass the waiting train within the time limits thus shown.

*Question Number 96. Where there are one or more trains to meet or pass a train between two times, or more than one train is to meet a train at any point, in what way is attention called to the fact?*

ANSWER. Usually by a dash under the figures, thus:

No. 5.	No. 3.	No. 1.	Stations.	No. 2.	No. 4.	No. 6.
12.45	.....	.....	Palisade.	.....	.....	12.45
.....	10.20	.....	Tipton.	.....	.....	.....
.....	<u>11.00</u>	10.50	Creston.	.....	11.50	.....
.....	11.30	<u>11.30</u>	Emerson.	<u>11.30</u>	<u>10.50</u>	.....
.....	<u>11.50</u>	11.50		.....	.....	<u>11.50</u>

*Question Number 97. When a siding extends between two adjoining telegraph stations and a train is to be met or passed by one or more trains on such siding, how must the time be shown at both ends?*

ANSWER. The time at each end of the siding should be shown in full-faced type for all trains concerned.

6. The following signs when placed before the figures of a schedule or after a station name indicate:

“s”—regular stop.

“f”—flag stop to receive or discharge passengers or freight.



“¶”—stop for meals.

“Lv.”—leave.

“Ar.”—arrive.

“DN”—day and night telegraph office.

“D”—day telegraph office.

“N”—night telegraph office.

“R”—register.

“W”—water station.

“C”—coaling station.

“T”—turntable.

“Y”—wye.

“O”—track scales.

“P”—Telephone.

“□”—Telegraph instruments may be connected to wire.

*Question Number 98. Certain letters or signs are placed before the time of a train at a station to indicate that it is to stop for meals, on flag, or regularly. What letter indicates a regular stop?*

ANSWER. The letter “s.”

*Question Number 99. What indicates a flag stop, to receive or discharge passengers or freight?*

ANSWER. The letter “f.”

*Question Number 100. What indicates stop for meals?*

ANSWER. The paragraph sign, “¶.”

*Question Number 101. How is leaving time shown?*

ANSWER. By the abbreviation “Lv.”

*Question Number 102. Arriving time?*

ANSWER. By the abbreviation “Ar.”

*Question Number 103. Day and night telegraph offices?*

ANSWER. By the letters "DN."

*Question Number 104. Day telegraph office only?*

ANSWER. By the letter "D."

*Question Number 105. Night telegraph office only?*

ANSWER. By the letter "N."

*Question Number 106. Train registering stations?*

ANSWER. By the letter "R."

*Question Number 107. Water stations?*

ANSWER. By the letter "W."

*Question Number 108. Coaling stations?*

ANSWER. By the letter "C."

*Question Number 109. Turntables?*

ANSWER. By the letter "T."

*Question Number 110. Wyes?*

ANSWER. By the letter "Y."

*Question Number 111. Track scales?*

ANSWER. By the letter "O."

*Question Number 112. Telephone stations?*

ANSWER. By the letter "P."

*Question Number 113. Points where telegraph instruments may be attached to the wire?*

ANSWER. By a small square, thus: □

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6 (A). Notice of new time-table must be bulletined at least twenty-four hours prior to its taking effect; for six days thereafter superintendents must, by train

order, require each conductor and engineman to acknowledge receipt of new time-table.

Before starting on any district upon which they have not been running, or when absent for six days or over, train and enginemen must inquire for and know that they have the current time-tables and supplements.

*Question Number 114. What notice is given of new time-tables, for how long a time before they take effect, and how must they be receipted for?*

ANSWER. Notice of new time-table is bulletined at least twenty-four hours prior to its taking effect. For six days thereafter superintendents must, by train order at necessary initial stations, ascertain that each conductor and engineman is provided with a copy.

*Question Number 115. Must conductors and enginemen sign such order personally?*

ANSWER. Yes, if practicable. If enginemen do not report at such offices the 31 order making the inquiry may be delivered to enginemen by conductors.

*Question Number 116. Is it necessary to sign oftener than once on each district?*

ANSWER. Not if the conductor knows that his engineman has a copy. The operator can be shown a copy of an order bearing the signatures acknowledging possession of new time-table; but if he still insists upon the men signing again there is no objection to doing so.

*Question Number 117. Should employes be sick, or for any other reason be off duty for six days or*

*more, what is required with regard to time-tables or supplements, when returning to work?*

ANSWER. They must, before resuming work, ascertain whether there has been a change, and, if so, they must procure copies of the new time-table. The dispatcher annuls the receipt-notice after six days, and is thereafter relieved from responsibility, except that before permitting conductors and enginemen of other companies to run on their district they must know that they are in possession of the current time-table.

*Question Number 118. Employes sometimes run on other districts than their own, and there may have been a change or supplements issued of which they have no knowledge; in such cases, what precautions must they take to insure their having the last time-table or supplement?*

ANSWER. The rule provides that they must inquire for and know that they have the current time-table or supplement.

NOTE.—The receipt should read, "I have Time-table No. . . . , taking effect at . . . m., . . . . . , 19..." This should be on the 31 form, and be issued in time to insure that every train on the road has a copy when the new time-table takes effect. Conductors and enginemen should sign the order personally at least once on each district. If, after acknowledging once, the order be presented at some other station, it may be again signed, or, should they prefer, they may be excused from signing a second time by producing a copy which they have previously signed. All that is necessary is to have one receipt on each district.

At offices where new time-tables are issued, it is well to keep a book and have all persons receipt therein when new time-tables are delivered to them. Dispatchers ordinarily get receipt only from conductors

and enginemen. The person whose duty it is to provide trainmen, enginemen and operators with new time-tables should check up about the time the new time-table is to take effect, and advise the dispatcher of conductors, enginemen and operators who have not receipted to him for the new time-table. Dispatchers must be especially careful to get acknowledgment from such persons. Also, they must not overlook the enginemen of helpers and yard engines, or foremen, yardmasters and work-train crews, or others that may be tied up at some intermediate station over Sunday. When there are day and night shifts, signatures must be procured from both. It is important that operators be promptly provided with copies of new time-tables, as otherwise they might change their order signal to proceed, before the train for which they perhaps hold orders may have lost right and class, owing to a change in its time.

## SIGNAL RULES.

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7. Employes whose duties may require them to give signals must provide themselves with the proper appliances, keep them in good order, and ready for immediate use.
8. Flags of the prescribed color must be used by day, and lamps of the prescribed color by night.
9. Night signals are to be displayed from sunset to sunrise. When weather or other conditions obscure day signals, night signals must be used in addition.

LECTURE. Section- and bridge-foremen must keep weeds cleared away from slow-signals and try to avoid placing them on curves or where they may be obscured by rocks or trees. Such signals should be three or four feet above the rail, on engineman's side, and, when possible, on straight track. When flags become faded they must be replaced with new ones. Lights must be kept eighteen inches apart; otherwise, when green and red are used, the red will absorb the green to a certain degree and the green cannot be readily distinguished.

*Question Number 119. What is required of all employes whose duties may make it necessary for them to give signals?*

ANSWER. They must provide themselves with the proper appliances, and keep them in good order and ready for immediate use.

*Question Number 120. What kind of signals must be used by day?*

ANSWER. Flags of the prescribed color.

*Question Number 121. What kind by night?*

ANSWER. Lamps of the prescribed color.

*Question Number 122. When must night signals be displayed?*

ANSWER. From sunset to sunrise, and when weather or other conditions obscure day signals, night signals must be used by day in addition to day signals.

*Question Number 123. When must torpedoes be used?*

ANSWER. Both by day and night.

## VISIBLE SIGNALS.

10.

### COLOR SIGNALS.

COLOR.	INDICATION.
(a) Red.	Stop.
(b) Green.	Proceed, and for other uses prescribed by the Rules.
(c) Green and Red.	Proceed with caution.
(d) Green and White.	Flag stop. See Rule 28.
(e) Blue.	See Rule 26.

LECTURE. It will be noted that these rules refer to stop, caution and proceed signals; the old Code treated them as danger, caution and safety. When flags become dirty or faded they should be discarded. Often, engines are observed displaying flags which cannot be positively identified at any distance.

When section or bridge foremen know track or bridges to be unsafe, they must not depend alone upon signals at the side of the track, but must stop trains and notify them. They may understand that they are relieved from stopping trains and notifying them, only after they have advised the dispatcher and obtained from him acknowledgment of such notice.

Watchmen must be instructed to care for lights and see that they do not become dim or fail.



*Question Number 124. What color indicates stop, danger?*

ANSWER. Red.

NOTE.—After correct answer is given, exhibit flags. If testing for color-blindness, or otherwise in doubt, a flag of another color may be exhibited.

*Question Number 125. What color indicates proceed?*

ANSWER. Green.

*Question Number 126. Green color does not of itself always mean proceed; the rules prescribe that it may be used for other purposes. Name some of the other uses of green for signals?*

ANSWER. On the front of an engine, near the headlight, green would mean a section following; on the pilot-beam or tender of an engine, or on the last car of a train, green is used for the markers. Fuses, burning green, indicate caution.

*Question Number 127. What colors in flags or lights must be used to indicate caution?*

ANSWER. Green and red combined. By day, a combination green and red flag; green above, red below. By night, green and red lanterns, placing them about eighteen inches apart. Distant semaphore signals have the blades painted green and red with a white stripe between; when it is dark, caution is indicated by use of a lamp which displays a green and a red side by side.

*Question Number 128. What indicates a flag-stop?*

ANSWER. By day, a combination green and white flag; by night, green and white lanterns.

*Question Number 129. What signal must workmen use to protect themselves while working about cars when they are in position to be injured, should such cars be moved?*

ANSWER. Blue.

*Question Number 130. Should a white light be observed on a train-order signal, a switch signal or a semaphore signal, how must trains be governed?*

ANSWER. They must stop.

*Question Number 131. Should a green flag or light be observed on the engineman's side, after having already passed a caution signal, what may be understood?*

ANSWER. That the train may then proceed at its usual speed, having reached the end of the section of track requiring slow running.

LECTURE. If, on roads using white to indicate "proceed," a dwarf-switch light, displaying red, were to be blown out, or become obscured, and a white light be seen near it, it might easily be mistaken for "proceed." White, being a common light and not distinctive in color, should have no place in good rules where the safety of trains depends upon lights. It is perhaps unfortunate that white must be used to identify extra trains. On roads using green for proceed, should a red or green lens on a fixed signal break, trains are stopped by the white light, or the absence of light. If white be used to indicate "proceed" and a red lens were to break (a

common occurrence on switches), a white or "proceed" signal would be observed when stop was intended. Under these rules, white lights on fixed signals must be understood to indicate stop, the same as red, as it is a signal imperfectly displayed.

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11. A fusee on or near the track, burning red, must not be passed until burned out. When burning green, it is a caution signal.

NOTE.—Fusees must not be placed on bridges or where fire may be communicated.

*Question Number 132. If a fusee is observed on or near the track, burning red, what must be understood.*

ANSWER. It must not be passed until burned out.

*Question Number 133. To insure the observance of this rule, what should trainmen take into consideration in throwing fusees from moving trains?*

ANSWER. When practicable, they should drop the fusee where it can be seen in time to enable an approaching train to stop before passing it. But they must be thrown off anywhere and at any time, when necessary to prevent an accident—in a tunnel, cut or on a sharp curve, if need be.

*Question Number 134. If found burning on a track other than that used by the train, or anywhere within the right-of-way, must the train be stopped?*

ANSWER. Yes, it is a stop-signal for any train when seen burning red, even though on a siding or on the opposite double track; when thrown off they may rebound from the place first struck.

*Question Number 135. Is the use of red fuses confined to night time?*

ANSWER. No, they must be used by day during heavy snow or fog. A red fusee can be seen at all times through snow or fog much farther than any other visible signal.

*Question Number 136. Why is it so necessary to use red fuses during snow storms both day and night?*


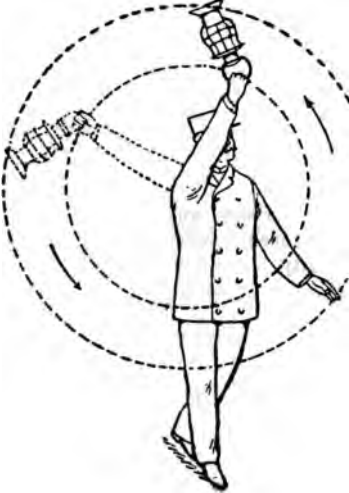
ANSWER. Because a flanger may be moving at such times, and may scrape torpedoes off the rails without exploding them. Wedge and rotary snow plows are liable to do the same thing, or to make so much noise that torpedoes cannot be heard; this must always be borne in mind, and torpedoes must not be depended upon to stop trains. Red fusees have been known to prevent a train from colliding with one ahead, though both were moving; on account of snow or fog, the markers could not be seen. The red fusee in such case was burned from the rear platform of the caboose. Again, torpedoes often become so deeply covered with snow in cuts that they cannot be heard when they explode.



*Question Number 137. If a fusee be found burning green, what is meant?*

ANSWER. It is a caution signal.

*Question Number 138. May red fusees be used to caution trains?*

ANSWER. Red fusees must not be passed until burned out, and must not be used for purposes other than those prescribed by the rules.

MANNER OF USING.	INDICATION.
<p>(c) Swung vertically in a circle across the track, when the train is standing.</p>	<p>Back.</p> 
<p>(d) Swung vertically in a circle at arm's length across the track, when the train is running.</p>	<p>Train has Parted.</p> 

MANNER OF USING.	INDICATION.
<p>(e) Swung horizontally in a circle, when the train is standing.</p>	<p>Apply Air Brakes.</p> 
<p>(f) Held at arm's length above the head, when the train is standing.</p>	<p>Release Air Brakes.</p> 

13. Any object waved violently by any one on or near the track is a signal to stop.

NOTE.—Have the person who is examined stand up and give a practical illustration of how signals should be given by hand or lamp. On passenger trains the "proceed" signal should be given uniformly and as pre-

scribed. On long freights this cannot always be done; if the signal is given rapidly, move rapidly; if given slowly, move accordingly.

*Question Number 144. Give the stop signal?*

*Question Number 145. Proceed?*

*Question Number 146. To back?*

*Question Number 147. Train has parted?*

*Question Number 148. Apply air brakes?*

NOTE.—In making this signal the hand or lamp should be swung in a small circle at the right, being careful to describe a circle, otherwise the engineman may mistake it for a stop signal.

*Question Number 149. Release air brakes?*

*Question Number 150. What must be understood if any object is seen to be waved violently by any one on or near the track?*

ANSWER: The train should stop, even though the object is not waved violently. Farmers are not supposed to have proper stop-signals at hand, nor do they always understand their use. They may have discovered a bridge burned out, or a serious defect in track, and thus try to warn trains in the most intelligent way they can think of.

## AUDIBLE SIGNALS.

### 14. ENGINE STEAM WHISTLE SIGNALS.

NOTE.—The signals prescribed are illustrated by “o” for short sounds; “—” for longer sounds. The sound of the whistle should be distinct, with intensity and duration proportionate to the distance the signal is to be conveyed.

SOUND.	INDICATION.
(a) o	Stop. Apply brakes.
(b) ———	Release brakes.
(c) — o o o	Flagman go back and protect rear of train.
(d) ————	Flagman return from west or south.
(e) ————	Flagman return from east or north.
(f) ———	When running, train parted; to be repeated until answered by the signal prescribed by Rule 12 (d). Answer to 12 (d).
(g) o o	Answer to any signal not otherwise provided for.
(h) o o o	When train is standing, back. Answer to 12 (c) and 16 (c).
(j) o o o o	Call for signals.



SOUND.	INDICATION.
(k) — o o	To call the attention of trains of the same or inferior class, or inferior right, to signals displayed for a following section.
(l) — — o o	Approaching public crossings at grade.
(m) —————	Approaching stations, junctions and railroad crossings at grade.
(n) — o	Approaching curves, tunnels, snow sheds and other obscure places.
(o) oo oo oo	Air-brake sticking.
(p) o o —	Air has failed on leading engine.
(q) oo oo	Second engineman assist in recharging the train.

A succession of short sounds of the whistle is an alarm for persons or cattle on the track, and calls the attention of trainmen to danger ahead.

- 14 (A). Should a train fail to answer whistle signals as provided in 14 (k), the train displaying the signals will stop at once and personally notify them, and will report all such failures.

**LECTURE.** The distance that a whistle signal is to be conveyed governs the way it should be sounded. If only a short distance, sound the whistle softly and with less duration; if a half mile, or against the wind, blow loud and longer. Signals should be given accurately; the public-crossing whistle is one that is not always made properly; the last sound, instead of being short, is sometimes longer

than the first or second. Again, two long blasts may be heard, followed by a pause of several seconds before the final two short blasts are blown. Improper whistling should be promptly and vigorously corrected. Correct signals can be given as easily as incorrect ones and without extra labor. Instead of bending their energy toward a proper compliance with this rule, some enginemen seem to study how to violate it. The station whistle is often sounded less than two seconds, which misleads passengers, fails to be heard at the station and really indicates to the trainmen that an application of the brakes is necessary. Should such enginemen desire the brakes applied at this point and call for them, it is doubtful if their wishes would be promptly complied with, from the trainmen having become accustomed to hearing the whistle sounded in this manner for the station. The station whistle should be four seconds long, so that it will carry far and give ample warning; if given for only one or two seconds, passengers, mail clerks and others are misled. The signal to release brakes is seldom heard, the two short whistles being used instead.

NOTE.—If there is a whistle appliance at hand, have the enginemen give a practical illustration of how the steam-whistle signals should be sounded. If not, use the "buzzer."

*Question Number 151. What is the engine steam-whistle signal to stop or apply the brakes?*

ANSWER. One short blast.

*Question Number 152. To release brakes?*

ANSWER. Two good long blasts, to prevent flag-

men from thinking their signal to stop has been observed and answered, should there happen to be a flagman so signalling.

*Question Number 153. What is the signal for the flagman to go back and protect the rear of the train?*

ANSWER. One long and three short blasts.

*Question Number 154. If the engine is at the rear of the train pushing it and the engineman sounds the signal to protect, which way must the flagman go?*

ANSWER. He must go back and protect against trains that may be following his train, without regard to the make-up of the train.

*Question Number 155. If on a work train having right to move in either direction?*

ANSWER. He must protect the rear of such train.

*Question Number 156. What signal is used to send the flagman out to protect the front of a train?*

ANSWER. The engineman must send a man out. The front brakeman or fireman must go at once if the train needs protection, without waiting to be told, in case the engineman is injured or overlooks sending them.

*Question Number 157. What signal is given to call in flagman from the west or south?*

ANSWER. Four long blasts.

*Question Number 158. To return from the east or north?*

ANSWER. Five long blasts.

*Question Number 159. What is the signal for train parted?*

ANSWER. Three long blasts.

*Question Number 160. When must two short sounds of the whistle be given?*

ANSWER. In answer to any signal not otherwise provided for.

*Question Number 161. Is it proper to sound two short blasts of the whistle when the train parts and the trainmen so indicate from the rear by swinging their arms or lamps in a circle?*

ANSWER. Three long blasts must be sounded in answer to such signal.

*Question Number 162. May two short blasts be sounded in answer to a signal to back the train?*

ANSWER. No.

*Question Number 163. What is the signal to back?*

ANSWER. Three short blasts.

*Question Number 164. When is it proper to sound four short blasts of the whistle?*

ANSWER. When signals are required; or when they are given and not understood; or when there is a failure to give them, or it is desired to have them repeated. It is a call for signals from the man at a switch or crossing; from men in front of, on, or at the rear of a train; or at any time when signals are improperly given.

*Question Number 165. When a train is displaying signals for a following section, must attention*

*be called to them by whistle? What is the proper whistle signal for this purpose, and whose attention should thus be called?*

ANSWER. The whistle signal for this purpose is one long and two short blasts, to call the attention of trains of the same or inferior class, or inferior right, to signals displayed for a following section.

*Question Number 166. Must such whistle-signal be given to trains that are passed as well as to those that are met?*

ANSWER. Yes.

*Question Number 167. Must the whistle signal be given both at the front and the rear of trains that are met or passed?*

ANSWER. The rule does not require the signal to be given at the rear, but it is a good thing to do if the train met or passed is a long freight and the weather is thick or windy, or there are curves.

*Question Number 168. Must this whistle signal be used on double track?*

ANSWER. Yes, unless there should be twenty-five or more miles of double track in one place; but it is not always practicable to stop and notify trains of such signals, should there be a failure to acknowledge them.

*Question Number 169. Must the whistle signal be given to yard engines?*

ANSWER. If yard engines are at factories, coal mines or other switching tracks outside of the principal yard, even though within yard-limit signs, it would be well to call their attention to the signals, especially when displayed by first-class trains.

*Question Number 170. Must the whistle signal be given to extra trains?*

ANSWER. Yes.

*Question Number 171. Must the whistle signal be given to trains of superior class?*

ANSWER. Not unless the inferior-class train which is displaying the signals is given right, or an order to meet such train, and is running in sections without sections having been specified in the orders.

*Question Number 172. Must extra trains call attention to their signals by whistle?*

ANSWER. No. They are not displaying signals for a following section.

*Question Number 173. Should a train fail to answer signals calling attention to following section, what must be done?*

ANSWER. The train displaying signals must stop at once and the engineman of the train failing to answer must be notified, and the facts reported.

*Question Number 174. May any kind of an acknowledgment be accepted?*

ANSWER. No. Two short blasts of the engine whistle must always be given in answer.

NOTE.—The words "or inferior right" were added to 14(k) to provide for signals being whistled to extra trains, and to safeguard Rule 218. The Code is not entirely clear upon these points.

*Question Number 175. What signal is given when approaching public crossings at grade?*

ANSWER. Two long and two short blasts. Some companies also require this signal to be given for subway and overhead crossings.

*Question Number 176. What is the signal to announce that the train is approaching a station, junction or railroad crossing?*

ANSWER. One long blast of the whistle of four seconds' duration.

*Question Number 177. When is the signal given by one long and one short blast to be used?*

ANSWER. When approaching curves, tunnels, snow-sheds and other obscure places; also when approaching a train which is receiving or discharging passengers at a station.

*Question Number 178. Are enginemen required to give a whistle signal at time-table meeting points with superior-class trains, and at any meeting point that may be fixed by train order, and in what manner?*

ANSWER. Yes, by .....

*Question Number 179. Should the engineman fail to do so, what must the conductor do?*

ANSWER. Give the cord-signal to stop at once. [See Rule 85 (A).]

LECTURE. The advisability of providing a whistle signal to be used to indicate meeting points was discussed by the American Railway Association, but not adopted. It was thought by some that too many whistle signals were burdensome and of questionable value; that such a signal would put too much responsibility upon the engineman and cause the trainmen to be less watchful, as whistling becomes perfunctory in time, and the signal might not be carefully watched for. There has been much

favorable and unfavorable comment upon the practice. Many managers approve it, and there is no record of accident resulting from its use; but accidents have happened which might have been prevented had such a signal been in use and carefully observed.

Additional signals adopted by some companies are those calling sectionmen; answer to caution signals; stock on the right-of-way; fire alarm; wrecks; and, on one road, giving notice when cars are to be moved on a repair track. It would seem that a line must be drawn somewhere, however, between signals that are merely convenient and those that are really necessary.

*Question Number 180. What is the signal to indicate that the air-brakes are sticking?*

ANSWER. Two short blasts repeated three times with intervals between, thus: oo oo oo.

*Question Number 181. When the air fails on the leading engine, in case of double-headers, and it is necessary for the second engineman to take charge of the air-brake, what signal is sounded?*

ANSWER. Two short blasts and one long blast.

*Question Number 182. When and how must this signal be answered?*

ANSWER. After the second engineman has control of the brake, he must answer by repeating the signal.

*Question Number 183. When double-headers are run and it is desired to have the second engineman assist in recharging on descending grades, what sig-*



*nal must be given to notify him to do so, and when and how must such signal be answered?*

ANSWER. Two short blasts, to be repeated after an interval, thus: oo oo. After the second engineman has cut in, he must answer in the same manner.

*Question Number 184. When must the second engineman cut out his pump?*

ANSWER. When the gauge indicates the proper pressure, or before, if he notes that the train needs checking.

*Question Number 185. Should he fail to do so, what would be the effect upon the train?*

ANSWER. It could not be controlled by the air-brake.

*Question Number 186. When persons or stock are observed on the track, or when there is danger ahead, what signal must be sounded?*

ANSWER. A succession of short blasts.

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15. The explosion of one torpedo is a signal to stop; the explosion of two, not more than two rail lengths apart, is a signal to reduce speed, and look out for a stop signal.

NOTE.—Torpedoes must not be placed near stations or road crossings where persons are liable to be injured by them.

*Question Number 187. When one torpedo is exploded, what must be understood?*

ANSWER. Stop at once.

*Question Number 188. When it is desired to*

*caution a train, how many must be used, and how far apart must they be placed?*

ANSWER. Two must be used, placing them not more than two rail-lengths apart.

*Question Number 189. If they are placed further apart than two rail-lengths, what would they signify?*

ANSWER. They must then be treated as two signals to stop at once.

*Question Number 190. In case of three-rail tracks, which rail must torpedoes be placed on?*

ANSWER. On the rail that is used by cars of both gauges, to insure both narrow and broad gauge trains exploding them.

*Question Number 191. Should they in all other cases be placed on the engineman's rail; that is, the right-hand rail as regards the train's movement?*

ANSWER. Neither rail is specified by the rules. They should, however, be placed on the engineman's rail, unless it is covered with mud or snow and the opposite rail is not, except when there are three rails. The reason why the engineman's rail is not indicated is that there may be men working on the track who do not understand the necessity for placing them on any particular rail.

*Question Number 192. If one or more torpedoes are exploded on the fireman's rail, is it a signal for the train exploding them?*

ANSWER. Yes. They must be respected by the engineman of the train exploding them, regardless

of what rail they are on, or what rail he may think they are on.

*Question Number 193. When in doubt about torpedoes being in good condition, or if they are likely to become impaired through rain or snow, what precautions must be taken to insure their being exploded?*

ANSWER. Two must be placed, one on each rail opposite each other, to insure the explosion of at least one of them. They must not be placed together on the same rail, as the explosion might then be severe enough to damage a flange. During heavy snow, a newspaper laid on a torpedo, with snow packed around it, will insure an explosion that can be heard.

*Question Number 194. What should be the duty of sectionmen or bridgemen who run over or damage torpedoes?*

ANSWER. They must at once replace them.

*Question Number 195. Where should torpedoes not be placed?*

ANSWER. Torpedoes must not be placed near stations or crossings where persons are liable to be injured by them.

*Question Number 196. Why should employes not ride on the pilot of an engine?*

ANSWER. Because they are liable to be injured by the explosion of torpedoes.

*Question Number 197. What warnings should be given?*

ANSWER. Conductors and enginemen should warn inexperienced brakemen and firemen not to stand near torpedoes after placing them, because when exploded the caps may cause injury.

16. AIR-WHISTLE OR BELL-CORD SIGNALS.

SOUND.	INDICATION.
(a) Two.	When train is standing, start.
(b) Two.	When train is running, stop at once.
(c) Three.	When train is standing, back the train.
(d) Three	When train is running, stop at next station.
(e) Four.	When train is standing, apply or release air brakes.
(f) Four.	When train is running, reduce speed.
(g) Five.	When train is standing, call in flagman.
(h) Five.	When train is running, increase speed.

NOTE.—Questions on the above rules should be changed about and not asked in the order given, thus avoiding mere perfunctory answers.

LECTURE. The “one” air-whistle has been omitted from the revised Code, because it is not distinctive, being made whenever the air hose is parted or coupled, and for this reason it does not mean much of anything when a train is standing. Should one whistle be heard when a train is running, the engineman must look back to see if there is anything wrong, or if any one is trying to attract his attention in this manner. Enginemen of

freight trains must be conversant with these signals, as a passenger engineman is liable to become ill or to be injured at any time, and, in consequence, a freight engineman might be temporarily needed for the run.

*Question Number 198. What do two sounds of the air-whistle mean when train is standing?*

ANSWER. A signal to start.

*Question Number 199. What do the two sounds mean when train is running?*

ANSWER. Stop at once.

*Question Number 200. What do three sounds signify when train is standing?*

ANSWER. Back the train.

*Question Number 201. When train is running, what do three sounds signify?*

ANSWER. Stop at next station.

*Question Number 202. Where should this signal be given?*

ANSWER. As soon as practicable after leaving the last station and before the station at which it is desired to stop is reached, so as to give the engineman time to calculate the distance necessary for making the stop; also, to prevent his having to answer with two short blasts after having whistled for the station.

LECTURE. The objection to the engineman's answering the bell-cord signal near a station is that there may be a train not far enough in the siding to clear the main track, and when the engineman

answers the conductor's signal to stop, the flagman protecting such train may be misled into thinking his stop signal properly answered, and so make no further effort to stop the approaching train. Out in the country, however, the flagman is not so likely to be hidden by buildings.

There have been two cases, recently, where this has happened. In one instance, the flagman understood that the engineman had answered his signal before the engine was visible to him, and stepped aside. It is difficult to understand just how the flagman arrived at such a conclusion; if he could not plainly see the engine, how could he expect the engineman to see him? Flagmen should make sure that their signals are observed and properly answered. Enginemen should keep these circumstances in mind also, and when, after having sounded two short blasts in answer to some other signal, they see a flagman, evidently sent out to protect his train, they should stop, even if not signalled by the flagman to do so.

*Question Number 203. When a train is standing, what do four sounds of the air-whistle mean?*

ANSWER. Apply or release the air-brakes. If brakes are set, release them; if released, apply them.

*Question Number 204. When train is running, what do four sounds of the air-whistle signify?*

ANSWER. Reduce speed.

*Question Number 205. When train is standing, what signal is given by five sounds of the air-whistle?*

ANSWER. To call in flagman.

*Question Number 206. When train is running, what do five sounds mean?*

ANSWER. Increase speed.

*Question Number 207. When are signals "f" and "h" likely to be used?*

ANSWER. When there is heavy travel and the conductor has previously notified his engineman to run slowly until he has finished collecting fares. After collection is finished, the conductor may signal the engineman "five," to increase speed. There may also be occasion for the same signal when officials are inspecting track, to indicate when they have finished viewing certain places; or an engineman's watch may have stopped and his train not be making the speed necessary to reach the next station in season to clear a superior train. Or, signal "four" may be used when necessary to reduce speed while lunch is being served, after which signal "five" may be given, to resume regular speed; or in case an engineman should overlook a slow order.

## TRAIN SIGNALS.

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17. The head-light will be displayed to the front of every train by night, but must be concealed when a train turns out to meet another and has stopped clear of main track, or is standing to meet trains at the end of double track or at junctions.

*Question Number 208. Where and when must the head-light be displayed?*

ANSWER. To the front of every train by night, and by day during thick weather.

*Question Number 209. When must it be concealed?*

ANSWER. When a train turns out to meet another and has stopped clear of the main track, or is standing to meet trains at the end of double track or at junctions.

*Question Number 210. Must the head-light be concealed when standing to meet trains at all junction points, without regard to the normal position of the initial switch?*

ANSWER. It must not be concealed until the switch is so set that the opposing train cannot collide with the train which is waiting.



*Question Number 211. Before covering the head-light, what must be observed?*

ANSWER. It must be known that the main-track switch, next in front of the train, is properly set for the track to be used by trains in the opposite direction. At stations where operators attend the switches, this is especially necessary, as they may turn the switch for the waiting train, thinking it is to proceed at once, while it may have waiting orders of which they have no knowledge.

*Question Number 212. May the head-light be concealed before a train has stopped on a siding, or may the train be moved on a siding with the head-light covered?*

ANSWER. No.

*Question Number 213. If in doubt about the train being clear of the main track, may the head-light be concealed?*

ANSWER. No.

*Question Number 214. May trainmen at the rear assume that the engineman will keep the head-light displayed until he is assured that the train is clear of main track, and that, as the head-light is visible, they are therefore relieved from protecting their train against opposing trains, should it not entirely clear the main track?*

ANSWER. No. Trainmen must at all times guard the rear, even when a train-order meeting point is fixed. (See Rule 87.)

*Question Number 215. When the train turns out to be passed by another train, must the head-light be concealed?*

ANSWER. No.

*Question Number 216. Are enginemen required to keep the head-light displayed until following trains or sections are clear of the main track?*

ANSWER. No. The head-light will be concealed as soon as it is known that their own train has cleared. Enginemen cannot always know how many trains are following, or when they are "in to clear."

*Question Number 217. May following trains assume that the trains ahead will keep head-lights displayed until the following trains are also clear of the main track?*

ANSWER. No; each train stands on its own footing, so far as concealing head-lights is concerned.

*Question Number 218. If a following train is unable to clear, may it pull in as far as it can, thus letting its head-light be partially obscured by the cars of the train ahead?*

ANSWER. If the siding will not hold all of the trains, those which are not able to clear the main track must not allow their head-lights to be obscured by trains ahead, until a flagman has been sent out the required distance with stop-signals. Each engineman will conceal his head-light only when he knows that his train is clear. Following trains, which are unable to clear, must stand back on the main track with head-light exposed until flagman has gone out the proper distance; then they may pull in on the siding as far as the train ahead will allow. Each conductor and engineman must protect his own train and not depend upon any one else, or as-

sume that others not connected with the train will perform that duty for him. Unless fully protected, nothing must be allowed to obscure the head-light while any part of the train is on the main track. If there is room for only a few cars on a siding, the train should stand back on the main track with head-light displayed, until the opposing train arrives.

*Question Number 219. Should all sections of a train be unable to make a station and properly clear, may the sections ahead keep their head-lights displayed until all are clear of the main track?*

ANSWER. When an accident can be prevented by leaving the head-light uncovered it is proper to do so; but collision can usually better be averted by use of red fuseses and red lights.

LECTURE. As far as practicable, trainmen should take into consideration the length of a siding and the character of the trains they are to meet, and avoid crowding a station where a "saw" will result, especially where there are several sidings between telegraph stations. The dispatcher is not always able to issue instructions, and there is nothing gained by too many trains being at a station.

*Question Number 220. When a train has stopped clear of the main track, should its head-light be concealed, even though the opposing train is near?*

ANSWER. Yes. Head-lights, especially electric, blind enginemen and prevent them from seeing switches or a flagman, should there be a flagman back of the head-light to protect a following train

which is not clear of the main track. To keep the head-light exposed, in such cases, might result in more harm than good.

*Question Number 221. May the head-light be uncovered as soon as the engine of the opposing train has passed?*

ANSWER. The head-light must be kept concealed until the markers have also passed.

NOTE.—Engine numbers may be used to assist in identifying trains; in fact, they are largely depended upon for this purpose. Enginemen should, therefore, be instructed to keep the head-light numbers clean and bright and see that they correspond with the number of the engine. Too little attention is paid to this important matter on some roads. Often the numbers of engines are so small and obscure that they cannot be deciphered by night, and not always by day. The suggestion recently made that numbers be made portable, so that the engine crew can remove, clean or paint them when necessary, or when they become indistinct, is most excellent. Head-light engine-numbers should show to the front and sides. Train indicators are generally displayed on the caboose. It would be much better from the standpoint of safety to display such indicators both at front and rear of the train; its identity could thus be more easily ascertained as it approaches.

18. Yard engines will display the head-light to the front and rear by night. When not provided with a head-light at the rear, two white lights must be displayed. Yard engines will not display markers.

*Question Number 222. How must yard engines display their head-lights?*

ANSWER. To the front and rear.

*Question Number 223. If not equipped with head-light at the rear, what must be displayed there?*

ANSWER. Two white lights.

*Question Number 224. Must yard engines display markers?*

ANSWER. Not within yard limits. If a yard engine goes outside of yard limits and becomes a train, as set forth in the definitions (see "Train"), or if it is necessary at any time for other trains to know that it constitutes a train, either running with or without cars, it must display markers.

*Question Number 225. Must yard engines conceal their head-lights within yard limits when trains approach?*

ANSWER. No.

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19. The following signals will be displayed, one on each side of the rear of every train, as markers, to indicate the rear of the train: By day, a green flag; by night, a green light to the front and side and a red light to the rear, except when the train turns out to be passed by another and is clear of main track, when a green light must be displayed to the front, side and to rear.

LECTURE. Carefully note whether trains display markers. In operation, they are equally important with the signals displayed on engines that denote sections following; perhaps they are more vital, for superior trains meeting inferior trains can proceed against their signals if not required to wait for following sections, but should the markers be absent the section which the superior train may have orders to meet has not arrived complete, and if the superior train then goes on there might be a collision, the same as if the meeting order were disregarded,

Helper engines sometimes find it necessary to cut off and run down hill, in advance of the train they have helped; there is then nothing to hold the opposing train for the entire train which is following, except that the helper engines are not displaying markers, and trains must not be allowed to proceed until the markers arrive. Of course, the trainmen or enginemen must, in such cases, notify opposing trains that their own trains have not arrived complete, that there are engines or cars following; but failure to do so would not excuse the opposing train should it attempt to move against the other train before the markers arrive, when under orders to wait for it.

*Question Number 226. What are markers, and why are they necessary?*

ANSWER. Markers are flags or lights placed at the rear of a train to show that it is the rear, and that the whole train has arrived complete.

*Question Number 227. Should a freight train arrive with a caboose and apparently complete, except markers, what may be inferred?*

ANSWER. That it is doubling in and is hauling a dead-head caboose, or that there is a helper following. The whole train has not arrived.

*Question Number 228. How many markers must be used, and where must they be placed?*

ANSWER. Two must be used; they must be placed on each side at the rear of the last car in the train, except that if an engine be the last car markers must be displayed on its tender if running forward, or on its pilot-beam if running backward.

*Question Number 229. What kind of markers must be used by day?*

ANSWER. Green flags.

*Question Number 230. By night?*

ANSWER. Green lights to the front and side and red lights to rear, except when the train turns out to be passed by another and is clear of the main track, when the red lights must be turned next to the car and the green displayed to front, side and to rear.

*Question Number 231. May markers be altered so as to show white lights to engineman when the train is clear of main track?*

ANSWER. No.

*Question Number 232. Should markers be changed to show green to the rear when a train turns out to meet trains?*

ANSWER. No; only when it turns out to be passed.

*Question Number 233. When must the red lights be again shown to the rear?*

ANSWER. Before any part of the train which turns out to be passed attempts to again occupy the main track.

*Question Number 234. Should an engine be coupled to the rear of a train, where must the markers be displayed?*

ANSWER. On the rear-coupled engine. It is then the rear of the train.

*Question Number 235. Who arranges the markers on such engine?*

ANSWER. It is the duty of the engineman of the helper-engine to see that his fireman places the markers correctly. The conductor of the train must also know that they are displayed.

*Question Number 236. May the markers be also displayed on the caboose in that case?*

ANSWER. No; as that would indicate that two trains were coupled together, and this might be a cause of uncertainty to other trains.

*Question Number 237. May the engineman of the engine behind the caboose cut off at the summit of the grade and follow the train he helped, without flagging, on the assumption that as he is displaying the markers no train can leave the station in advance against him until he arrives with the markers?*

ANSWER. No. If the helper-engine cuts off, or breaks off, Rule 101 must govern, requiring the rear engine in that case to stop at once and wait for the front portion to return for it. If, however, the engine does follow, the movement must be made under protection of stop-signals, although the engineman may arrange with the conductor to hold all trains until he arrives.

*Question Number 238. Should an engine be cut off or break off from behind a caboose, is the conductor of the train relieved from notifying opposing trains that his train is not complete, even though no arrangement was made with the engineman of the helper to hold all trains for him?*



ANSWER. No. Opposing trains must be notified in the same manner as when a train doubles or breaks in two and takes the front portion to a siding. It would not do to entirely depend upon the absence of markers being noted in such cases, as the fact might be overlooked, the caboose being generally regarded as the last car of the train.

*Question Number 239. May an opposing train leave a station if no markers are displayed on the caboose or last coach of a train it has orders to meet?*

ANSWER. No, it must not do so, as a train is not met until its markers have passed. Without the habitual exercise of care, markers are liable to be overlooked, especially at stations where there are several tracks. Hence, all employes should watch for the markers, since each would be held responsible for any accident resulting from overlooking them. At the same time, opposing trains are not to assume that a train displaying no markers on its last car or rear engine has arrived. It may have broken in two, or it may be "doubling."

*Question Number 240. May an engineman leave a part of his train on a siding with markers displayed and take the front portion to a siding in advance and depend upon the markers to protect him while returning to his train?*

ANSWER. It is bad practice, even if the engineman has an understanding with his conductor that he will hold following trains until the engine returns. Should the occasion justify such a proposed movement, it would, when practicable, be bet-

ter to sidetrack the rear part of the train and let the front part take the markers, getting orders to return extra for the cars left behind. Markers are simply to indicate that the train is whole, unbroken, complete.

*Question Number 241. If a train were to come to a station at night and find a caboose on a siding, lighted and displaying markers, with perhaps a number of cars ahead of it, but no engine attached, what would it be the part of good judgment to do?*

ANSWER. Stop and ascertain whether the front portion has broken away and the crew perhaps asleep and unaware of it. Or the flagman protecting his train may have been passed, unseen, through some mishap befalling him or his not having the proper stop-signals. It is true that the rule requiring the front portion of the train to return, following a flag, would ordinarily prevent a collision, but it does not provide for the (rare) contingency of a middle part of a train broken off from the front portion and left on the track.

*Question Number 242. When should markers be removed?*

ANSWER. After the train has stopped clear of the main track at the end of its run. Passenger brakemen sometimes remove markers before the last station at the end of their run is reached; this practice should be stopped, as it encourages opposing trains to disregard Rule 83, requiring certain knowledge that the entire train waited for has arrived.

*Question Number 243. Is it proper to allow markers to be displayed on a caboose when a train*

*ties up over night, or receives orders to go only to an intermediate station and there switch for perhaps half a day?*

ANSWER. When a train ties up or has reached the end of its run, it is no longer a regular or an extra train by the rule definitions, and the markers should be taken in.

*Question Number 244. When work extras tie up over night and the men wish to sleep in the caboose, but there is no track to leave it on except the siding, what kind of lights should be displayed to protect the car?*

ANSWER. Blue lights. A blue light does not permit a car thus protected to be moved, while red lights might be mistaken for stop-signals by trains approaching on other tracks.\*

*Question Number 245. When engines are standing or moving about yards alone by night, what kind of a light must be displayed on the rear of the tender?*

ANSWER. A red light.

LECTURE. It is sometimes asked how the engineer is to know when his train is clear of the main track so that he may conceal his head-light by night, since by Rule 19 green still shows to the front when the markers are changed at the rear to indicate that the train is clear. The question is seldom asked except by those who, instead of the standard-code markers, favor showing a white light to the front

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\*This application of Rule 26 requires the train crew to be considered as "workmen."

when the train is clear. It is not good practice to depend upon a white light to indicate that a train is "in to clear," as the same road may also be using white lights on switches, and in such event an engineman might easily mistake the switch light for the white light on the caboose should a curve obscure the markers. When the conditions are such that enginemen cannot tell whether the rear of their trains are clear of the main track or not, they must not conceal their head-lights. They may call for signals, or wait until properly notified. If the train obstructs the main track, the train crew at the rear must protect it in any event, and not depend upon the head-light.

20. All sections of a train, except the last, will display two green flags and, in addition, two green lights by night, in the places provided for that purpose on the front of the engine.
21. Extra trains will display two white flags and, in addition, two white lights by night, in the places provided for that purpose on the front of the engine.

*Question Number 246. When trains are running in sections, what kind of signals must be displayed, where, and by what sections?*

ANSWER. All sections, except the last, must display two green flags, both by day and by night, and, in addition, two green lights by night, in the places provided for that purpose on the front of the engine.

*Question Number 247. What kind of signals must be displayed by extra trains, and where?*

ANSWER. Extra trains must display two white flags, both by day and by night, and, in addition,

two white lights by night, in the places provided for that purpose on the front of the engine.

*Question Number 248. When may these green or white signals be removed?*

ANSWER. When the train is annulled, or loses right and class, or arrives at the end of its run and has stopped clear of the main track, or when the point to which it was directed to display the signals is reached, or when the section for which the signals were displayed is annulled.

*Question Number 249. Must helpers coupled at the rear of the train display the signals, also?*

ANSWER. No. Only the leading engine displays the classification or identification signals. Helpers at the rear display the markers.

*Question Number 250. If the train were moving with the engine at the rear end and caboose ahead, what must be displayed at each end?*

ANSWER. The engine should display the classification or identification signals and the markers, as prescribed by the diagrams. A man must be stationed at the front of the caboose or leading car, to signal the engineman in case of need; and by night a white light must be shown on the platform of the caboose.

*Question Number 251. Why is it necessary to display flags by night in addition to lights?*

ANSWER. At daylight the fireman might fail to properly display the flags; and often, under strong electric lights in cities, the flags can be seen more

distinctly than lights. If the lights fail, the flags still have the same signification, and so might prevent an accident.

22. When two or more engines are coupled to a train, the leading engine only shall display the signals as prescribed by Rules 20 and 21.

*Question Number 252. When two or more engines are coupled to a train, or when coupled and running without cars, which engine displays the classification or identification signals?*

ANSWER. The leading engine only. To do otherwise would indicate that there were two trains coupled together.

LECTURE. When helpers cut off at the top of a hill and run independently of their train on account of the track or grade rendering it unsafe to run coupled to the train, the enginemen of such helper engines must be very particular to notify all trains they meet or pass that their engine does not constitute the entire train. Dispatchers should in their orders mention all engines which are moving the train when they fix meeting points. Of course, other trains must not move until the markers arrive, but in practice this additional precaution is found necessary.

*Question Number 253. If two or more engines, coupled, were to run backward, without cars, which engine must display the classification or identification signals, and which engine the markers?*

ANSWER. The leading engine must display the signals prescribed by Rules 20 and 21, and the rear engine will display the markers.

*Question Number 254. When two or more engines are coupled, which engineman sounds the whistle signals?*

ANSWER. The engineman of the leading engine.

*Question Number 255. To which engine must train orders be addressed?*

ANSWER. To the leading engine only; the other engines are merely additional power.

*Question Number 256. Must each engineman have copies of all train orders and clearances, and know under what instructions the train is being moved?*

ANSWER. Yes. Regular, helper or pusher enginemen must have copies of all orders and clearance cards.

*Question Number 257. When Form 52 is used, must each engineman be furnished a copy properly filled out?*

ANSWER. Yes, or else he must check the train-registers himself.

*Question Number 258. How should dispatchers assist operators in having the proper number of copies ready?*

ANSWER. Dispatchers should advise the operators when more than one engine is moving a train.

*Question Number 259. If a helper be coupled for a short distance only and there are not enough copies of orders for all, what should be done?*

ANSWER. The conductor must show the engineman of the helper his own copies of all orders under which the train is being moved.

*Question Number 260. Is it always practicable to address orders to the leading engine?*

ANSWER. It sometimes happens that a helper must be coupled ahead of the regular engine for a short distance, and it is not convenient to annul all former orders and reissue them, addressing them to the helper instead; it would hardly seem necessary to do so, but the rule makes no exceptions. If all are advised and proper explanations given by the dispatcher and others, it would seem sufficient to address the orders to the regular engine. Generally, except when the helper is small and unable to stand draw-bar pull, or is not equipped to supply steam-heat, it will be better to couple the additional engine behind the regular engine named in train orders, if help is needed for any considerable distance.

*Question Number 261. Should a helper be coupled ahead of an engine displaying signals, must the signals prescribed by Rules 20 and 21 be removed from the regular engine and placed on the helper engine?*

ANSWER. Yes, under standard code rules; but some railroad companies do not allow the signals to be removed from the regular engine, fearing that the engineman may neglect to again display them after the helper is detached. Rule 22 is then changed to read as follows: "When two or more engines are coupled to a train, the leading engine only shall display the signals as provided in Rules 20 and 21, except that helping engines will duplicate signals of the engine they doublehead. Whistle signals will be sounded by the leading engine."



23. One flag or light displayed where in Rules 19, 20 and 21 two are prescribed will indicate the same as two; but the proper display of all train signals is required.

*Question Number 262. If but one flag or light be displayed on the front of an engine, or but one marker be shown, what must be understood?*

ANSWER. It would indicate the same as two; but the proper display of all signals is required.

*Question Number 263. Why is it not safe to display but one signal, and why must they be duplicated in every case when used as prescribed by Rules 19, 20 and 21?*

ANSWER. If one flag or light should be lost or fail, there would still be one left to protect the following section or identify the train. It is very unlikely that both would fail at the same time, but they must be carefully watched, however. If a train is waiting for a time-table superior train that is running in sections, and the signals indicating that fact should fail and the whistle signals not attract attention, or the engineman neglect to give them, there would be no protection against collision with the following section of the superior train.

24. When cars are pushed by an engine (except when shifting or making up trains in yards) a white light must be displayed on the front of the leading car by night.

*Question Number 264. What precautions must be taken when cars are pushed by an engine by night, except when switching or making up trains in yards?*

ANSWER. A white light must be displayed on the leading car. In some large yards, a red light is required to be displayed when making transfer with other companies. It is not always safe to move cars in yards by night without a light being displayed on the leading car.

25. Each car on a passenger train must be connected with the engine by a communicating signal appliance.

*Question Number 265. What is the rule requiring a bell-cord or its equivalent?*

ANSWER. Each car of a passenger train must be connected with the engine by a communicating signal appliance.

26. A blue flag by day and a blue light by night, displayed at one or both ends of an engine, car or train, indicates that workmen are under or about it. When thus protected it must not be coupled to or moved. Workmen will display the blue signals and the same workmen are alone authorized to remove them. Other cars must not be placed on the same track so as to intercept the view of the blue signals, without first notifying the workmen.

*Question Number 266. What protection does a blue signal afford, and how must the same be displayed?*

ANSWER. [The rule (No. 26) should be repeated for answer.]

*Question Number 267. The rule says that a blue signal at one or both ends of an engine, car or train affords protection; may it be understood by this that if a car can be approached and moved from either end it is not necessary to protect it at both ends?*

ANSWER. It must be protected at both ends, except that on stub tracks it is not necessary to protect at the track's dead-end.

*Question Number 268. If a blue signal be observed at but one end of a string of cars, may the cars be switched from the other end, without first having the workmen remove the signal?*

ANSWER. No; none of the cars must be coupled to or moved while the blue signal is displayed.

*Question Number 269. May the switchmen remove a blue signal, couple other cars to those being repaired, then display the signal on the end of the last car which they placed on the repair track?*

ANSWER. No. Cars must not be coupled to those which are protected by a blue signal, nor allowed to obscure it, nor may any one, except the workmen who displayed the signal, remove it.

*Question Number 270. If a freight or passenger train is blue-flagged, may the engine which is to take the train from the station be coupled to such train?*

ANSWER. Not until the blue signal is first removed by the person who put it up.

*Question Number 271. If inspectors place a blue signal on an engine, should the attention of engineman be called thereto, and while the engine is thus blue-flagged may the engineman move the engine or make an application of the air?*

ANSWER. The inspector should call attention to the blue signal, but whether he does so or not, the engine must not be moved nor air applied while thus blue-flagged. The inspector may be changing a

brake-shoe and might get his hand injured if the brake were applied.

*Question Number 272. May switchmen switch a train which has a blue signal displayed on it, either at front or rear?*

ANSWER. No. But inspectors should place the signals where they can be plainly seen; to do otherwise would not be complying with the true intent of the rule.

*Question Number 273. May inspectors understand that by simply displaying a blue signal at the side of the track, or on a post, protection is afforded them, and that they are complying with the rule?*

ANSWER. No; the blue signal must be on each end of the car, or cars, about which they are working.

*Question Number 274. May yardmasters arrange a system of whistle signals to notify inspectors that they intend to immediately pull cars from the repair track, and then move cars on such track, after waiting until the workmen have had time to get out of the way?*

ANSWER. No, decidedly not. The blue signals must be removed by the workmen themselves before the cars are coupled or moved. A whistle signal may be used to indicate that the yardmen wish to have the blue signals removed, provided such whistle signal be different from any prescribed by the Code.

*Question Number 280. Must the absence of signals or failure to properly display them be reported, and to whom?*

ANSWER. Report should be made to the superintendent of all such cases.

28. The combined green and white signal is to be used to stop a train only at the flag stations indicated on the schedule of that train. When it is necessary to stop a train at a point that is not a flag station for that train, a red signal must be used.

*Question Number 281. When a regular train's schedule indicates flag-stops, what kind of a signal must be displayed to stop it at such stations?*

ANSWER. A combination green-and-white flag by day, or a green and a white lantern by night, placing the lanterns about eighteen inches apart, to prevent the white light absorbing the green. A box should be used if necessary, to avoid stopping trains in the opposite direction, arranging the lights so that they will show only toward the train which it is desired to stop.

*Question Number 282. If necessary to stop an extra train, or a regular train, where a flag-stop is not indicated in its schedule, what kind of a signal must be displayed?*

ANSWER. A red signal.

*Question Number 283. If an extra train, or a regular train not having the letter "f" before its time at a station, should find a green-and-white signal displayed at such station, must it stop?*

ANSWER. No. The signal may be disregarded, unless the train should be a local, running as an

extra; in that case, it should respect the local flag-stops.

*Question Number 284. Where should these signals be displayed?*

ANSWER. Always in the same conspicuous place, but so arranged that in case red be displayed to stop a train for passengers, it may not be mistaken for the train-order signal, unless that is also authorized to be used for such purpose.

*Question Number 285. If, at stations where there are train-order signals, a red flag or lantern be seen separate from the order signal, at a station which is not a flag-stop for the train in question, how must it be regarded?*

ANSWER. It should be understood that the train was signalled to stop for passengers or freight, or that the train-order signal was not working, the red flag or lantern being used instead. If the operator then explained that the order-signal was working, but that the train was stopped for passengers, freight or a message, such explanation should be accepted, and, after such red signal is taken in, the train could proceed without a clearance; but the engineman must also have the matter explained to him, or be given a clearance card. If, on the other hand, the operator stated that the order-signal was not working properly, and that the red flag or light was used to stop for train-orders, a clearance card would be required, or the signal must be changed to green, after receiving the orders, the same as is done when an order is delivered and the order-signal then restored to "proceed,"

*Question Number 286. If there is no order-signal at a telegraph office and a red flag or lantern is displayed, what must be understood?*

ANSWER. That all trains must stop and be governed by the flag or lamp signal in the same way as they would be if there were train-order signals.

29. When a signal (except a fixed signal) is given to stop a train, it must be acknowledged as prescribed in Rule 14 (g).

*Question Number 287. When a signal, except a fixed signal, is given to stop a train, how must it be acknowledged?*

ANSWER. By two short blasts of the engine whistle.

*Question Number 288. Should the engineman answer a train-order, semaphore, switch or other fixed signal, when such signal indicates stop, caution or proceed, or is changed to indicate such for his train within his view?*

ANSWER. No. The indication given by fixed signals must not be answered by the engine whistle.

*Question Number 289. What kind of an answer is required to such signals?*

ANSWER. Simply to obey them by stopping, reducing speed, or proceeding at usual speed, as their indication may require.

*Question Number 290. Must the signals of flag-men, also air-whistle or bell-cord signals, torpedoes, fuses and slow- or stop-flags be acknowledged, and in what manner?*

ANSWER. They should be acknowledged by two short blasts of the engine whistle.

30. The engine-bell must be rung when an engine is about to move.
31. The engine-bell must be rung on approaching every station, public road crossing at grade, tunnels and snow-sheds, and until they are passed; and the whistle must be sounded at all whistling-posts.

*Question Number 291. When must the engine-bell be rung?*

ANSWER. When an engine is about to move, and upon approaching every station, public crossing at grade, tunnels and snow-sheds, and until they are passed. The bell must not be kept ringing while standing at stations, however.

*Question Number 292. Where must the engine whistle be sounded?*

ANSWER. At all whistling points and elsewhere as required by the rules.

32. The unnecessary use of either the whistle or the bell is prohibited. They will be used only as prescribed by rule or law, or to prevent accident.

*Question Number 293. Is the unnecessary use of either the whistle or bell prohibited?*

ANSWER. Yes. It should be used only as prescribed by rule or law, or to prevent accident.

*Question Number 294. When the engineman receives the signal to start his train, is it proper to answer it by two short blasts of the whistle?*

ANSWER. No. Simply ring the engine bell and start.



*Question Number 295. After making the running air-test on passenger trains and receiving signal from flagman at rear that the brake is working on last car, is it necessary to answer the flagman's signal by two short blasts?*

ANSWER. No.

*Question Number 296. If the engineman fails to receive the signal from the rear car, what must he do?*

ANSWER. He should call for it; then stop, if it is not given, and ascertain the cause.

*Question Number 297. Is there any objection to giving two long blasts to indicate release brakes, or that the train is ready?*

ANSWER. No.

*Question Number 298. Is it sometimes necessary for enginemen to sound two short blasts when there is more than one engine moving the train?*

ANSWER. Yes; to secure a proper understanding and harmonious action.

*Question Number 299. What is the objection to the unnecessary use of the whistle or bell?*

ANSWER. The constant sounding of the engine whistle unnecessarily merely weakens its efficiency. Two short whistles, also being an answer to a stop-signal, if given without warrant, as, for instance, when signalled to start, might be the cause of an accident, if a flagman, for instance, were giving a signal to stop and should hear the two short blasts and therefore think that his signal has been noticed

and so make no further effort to stop the train he is to signal. Ringing the bell while standing at a station at night is a nuisance and unnecessary annoyance to persons in the vicinity.

*Question Number 300. Should the rules prescribe the use of the whistle and there be a city ordinance or law prohibiting its use, which must be respected?*

ANSWER. The law or ordinance, except when necessary to use the whistle to prevent an accident.  
 33. Watchmen stationed at public road and street crossings must use red signals only when necessary to stop trains, and green signals for other purposes.

*Question Number 301. When watchmen stationed at public road crossings desire to stop a train, what kind of signals must they use?*

ANSWER. Red.

*Question Number 302. What kind must they use to indicate proceed and to keep persons and teams away from the crossing?*

ANSWER. Green. (White is objectionable because of the many white lights in the vicinity of cities.)

## CLASSIFICATION OF TRAINS.

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81. Trains of the first class are superior to those of the second; those of the second class are superior to those of the third; and so on. Extra trains are inferior to regular trains.

All trains in the direction specified in the Timetable are superior to trains of the same class in the opposite direction.

\*81 (A). At meeting points, extra trains, as between each other, are superior in the direction in which regular trains are made superior.

*Question 303. To what trains are first-class trains superior?*

ANSWER. To second-class trains.

*Question Number 304. To what are second-class trains superior?*

ANSWER. To third-class; and so on.

*Question Number 305. To what are extra trains inferior?*

ANSWER. Extra trains are inferior to all regular trains.

*Question Number 306. Must there be superiority between all trains in one direction over trains of the same class in the opposite direction, and why is this necessary?*

ANSWER. All trains in one direction must be superior to trains of the same class in the opposite direction; otherwise, all would hold the main track at meeting points, and, there being no inferiority, no train would be compelled to wait for another. Hence superiority by direction is necessary.

*Question Number 307. On the district upon which a train is running, going which way are regular trains superior by direction to trains of the same class moving in the opposite way?*

ANSWER. In the direction specified in the foot-notes or special rules on the page of the time-table applicable to that particular district.

*Question Number 308. In which direction are extra trains superior, as between each other, at meeting points?*

ANSWER. In the direction that gives superiority to regular trains on a given district.

*Question Number 309. Is there any other superiority between extra trains, except as may be conferred by train orders?*

ANSWER. No.

LECTURE. The only superiority that exists between opposing extra trains is that conferred by rule, which allows certain extra trains to hold the main track at places of meeting with each other. If on any district east-bound regular trains are of superior direction over west-bound regular trains of the same class, then east-bound extra trains shall hold the main track at meeting points with west-

bound extras, unless the rule is modified by train-order. To receive orders to run as an officer, passenger or preferred extra, or to describe an extra by any other term, gives it no right to hold the main track at meeting points with other extra trains, should it be moving against the direction in which regular trains have superiority by direction on that district. If east-bound regular trains are superior, the dispatcher would have to indicate in orders that east-bound common extras must take the siding, if it were desired to have the west-bound preferred extra hold the main track at meeting points with them. He may give the westbound preferred extra right over east-bound extra trains, so scheduling it if desired.

82. Regular trains twelve hours behind their schedule time lose both right and class, and can thereafter proceed only by train order.

*Question Number 310. When does a regular train lose both right and class?*

ANSWER. When twelve hours behind its schedule time.

*Question Number 311. Rule 82 says, "Regular trains twelve hours behind their schedule time lose both right and class, and can thereafter proceed only by train-order." Should it be understood by "train-order" that a dispatcher may authorize a train which has become twelve hours or more late to resume its schedule; that is, after it has run extra for a few stations and overtaken its time, or if it should have two times at a station and not be twelve hours late on its leaving time when ready to proceed, but arrived twelve hours or more late?*

ANSWER. No. Once dead, always dead. Time-table authority to run cannot be restored by train order; not even though there would be a sufficient interval between an arriving and a leaving time. If the dispatcher could authorize a train to resume its schedule, it may properly be claimed that the schedule could be resumed without such instructions.

*Question Number 312. What, then, is the exact meaning of "train-order" in this rule?*

ANSWER. It means that a regular train twelve hours or more behind its schedule may thereafter proceed only as an extra train, or, of course, as some other regular train, or section of a train, which has not lost right and class. It means annulment of time-table authority to move, and makes it dependent thereafter upon train-order right.

*Question Number 313. If a train has two times at a station—for instance, due to arrive at 10.30 a. m. and to leave at 11.30 a. m.—when has it lost both right and class?*

ANSWER. When twelve hours later than its arriving time at any station, if at that time it has failed to arrive. If it arrived less than twelve hours late, it does not then lose right and class until twelve hours later than its leaving time at that station.

*Question Number 314. At such station, may the train "flag in" twelve hours or more late, and resume its schedule, provided it can leave before it is twelve hours late on its leaving time, or may the dispatcher authorize it to do so?*

ANSWER. No.

*Question Number 315. If such a train-order were sent, should it be obeyed?*

ANSWER. No.

*Question Number 316. May a dispatcher authorize the delayed train to run as the second section of such train on the supposition that before the regular train became twelve hours late he could have started another train as the first section, with the intention of running the regular as a second section?*

ANSWER. No. The dispatcher cannot authorize the regular to run as second or any other section; that would be the same as ordering it to resume its schedule, which cannot be done. The delayed train is dead and remains so.

*Question Number 317. May the dispatcher create another train, or section of a train, of the same number and start it from a station where a train has two times given, after the delayed train is overdue twelve hours or more later than its arriving time, but not twelve hours later than its leaving time?*

ANSWER. No. If he could authorize another crew to run on the unexpired part of the schedule, he could order the train which had lost its right and class to resume. There is no difference in theory.

*Question Number 318. May a train which has two times given at a station arrive on time, switch until twelve hours or more late on its arriving time, and then leave at any time before it is twelve hours late on its leaving time? Or may it arrive,*

*say, eleven hours and fifty-five minutes late, and leave at any time before it is twelve hours late on its leaving time?*

ANSWER. Yes, to both questions. It properly arrived as a train and cannot then be called dead until it is twelve hours behind its leaving time. Men cannot arrive merely as a train-crew, then leave as a train; but they may arrive as an existing train and leave as such. It is no longer a regular train, however, when it fails to arrive at a station less than twelve hours late.

*Question Number 319. If a train is at a station waiting for a superior regular train, when may it proceed against such superior train without train orders? Or, if it has train orders to meet a regular train, how long would the orders remain in effect?*

ANSWER. The waiting train may proceed when the superior train becomes twelve hours late on its arriving time. The meeting order would then become void.

*Question Number 320. May the conductor of a waiting train telegraph ahead, and, upon receipt of information that the opposing train is twelve hours or more late at some station and has failed to arrive, then proceed?*

ANSWER. No. The superior train must be twelve hours behind its arriving time at the station at which the inferior train is waiting before the latter may proceed against the opposing train, unless moved by train order.

*Question Number 321. In the absence of train orders, when may an extra or inferior-class train*



*proceed ahead of an overdue superior-class train which has two times given at a station?*

ANSWER. When such superior train fails to arrive within twelve hours of its arriving time at the station where the extra or inferior-class train is waiting to allow it to pass.

*Question Number 322. If a train were to wait at a station until a following superior train had lost both right and class and then proceeded ahead of it, but, afterward, should again fall back on the superior train's time, would it be necessary to clear such train until it had again lost right and class, or to receive orders to run ahead of it?*

ANSWER. No.

*Question Number 323. Should a train lose right and class and then be run extra and afterward overtake its regular schedule, would it require an order to run ahead of the regular train which it formerly was before losing right and class?*

ANSWER. No.

*Question Number 324. May a conductor flag his train into a non-telegraph station twelve or more hours late, where two times are shown for it, and resume his schedule, if it would permit him to leave less than twelve hours late, on the assumption that it would not be known that his train had lost right and class, and that, as the dispatcher could not reach him with orders, he might help himself in this way, no other train being aware of the fact that his train had lost right and class before arriving? Or may a train pass a non-telegraph station twelve hours or*

*more late, if it can make the next station less than twelve hours late, on the supposition that, the loss of right and class not being known, he might thus avoid running under protection to a telegraph office to get orders?*

ANSWER. No. It is not safe to assume that the facts may not be known, as some inferior train may have been waiting at such blind siding for the delayed train to pass and then may have left when the delayed train became twelve hours late on its arriving time. Afterward, this inferior train may receive orders to move in the opposite direction, and it would then be justified in disregarding such delayed train, understanding that, as it was once twelve hours late, it could not again exist from the point where it had thus lost right and class to the end of its run on that district. Or a work extra might be between the non-telegraph station and the next one beyond, and its flagman be protecting only against this delayed regular train, and when it became twelve hours late on its arriving time, there would be nothing to prevent the work extra from working without protecting further against it; so that if the train which has lost right and class should then enter the working limits it might collide with the unprotected work train.

*Question Number 325. May a train come to a station a few minutes over twelve hours late on its arriving time, and, finding the order-signal at "proceed," resume its schedule, provided the next station in advance could be reached before it would be twelve hours late there, on the assumption that a*

*few minutes in such cases would make no difference? Or, under such circumstances, may a train pass a station twelve hours late, or a few minutes more, even if but one time is shown for the train at such station?*

ANSWER. No; for the reason that the orders which might have been sent to that station annulling the delayed train would, under the rules,\* be destroyed by the operator, and his order-signal then restored to "proceed" the moment such train became twelve hours overdue at that station. Also, other trains may have received the annulment order and be moving against the delayed train.

*Question Number 326. Having in mind the line of reasoning stated in the last answer, would it be a conductor's duty to hasten to the telegraph office and notify the operator that his train has arrived less than twelve hours late, where a train has two times given at a station and the twelve-hour limit is nearly past when it arrives?*

ANSWER. Yes, it might prevent a misunderstanding.

*Question Number 327. At a station where the view is obstructed, when may the operator consider a train twelve hours late and destroy all orders he may have for it?*

ANSWER. When a train has an arriving and leaving time it would not be safe to assume that it has lost right and class until it is twelve hours late on its leaving time, as it may have arrived less than

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\*See Rule 220.

twelve hours late and be obscured from view, or the conductor may have failed to report to the office his arrival. The operator should retain the orders until the train is twelve hours late on its leaving time; or else positively assure himself that the train is not within station limits, if he has orders that are to be destroyed when the train becomes twelve hours late on its arriving time.

*Question Number 328. May the dispatcher annul a regular train between A and C and run a train on the unexpired part of the schedule between C and E, whether such schedule shows an arriving and leaving time or only one time?*

ANSWER. Yes. When a train is annulled between certain points, the schedule beyond those limits remains unaffected. The order annulling a train between A and C does not change the schedule leaving time at C. The annulment of the train between A and C still leaves the schedule unaffected between C and E, which would not be the case had it arrived over twelve hours late at C.

*Question Number 329. If a train has two times given it at C and is annulled between A and C, when may an inferior train proceed ahead of it from C?*

ANSWER. Only when it becomes twelve hours late on its leaving time, unless moved by train order.

*Question Number 330. If a train is running in sections, when does each section lose right and class?*

ANSWER. All sections lose right and class when by schedule they are twelve hours late; no allow-

ance is made for the five minutes sections must keep apart.

*Question Number 331. When a train is running on a late-schedule order, Form E, Example 4,\* does such order operate to extend the life of the train more than twelve hours beyond its time-table time?*

ANSWER. No. The train loses right and class when it becomes twelve hours later than its regular time-table schedule. If the train is running on a schedule making it four hours later than its time-table time, it dies when it is eight hours late on such new-schedule order.

*Question Number 332. Suppose the dispatcher issues an order to a branch freight-train, for instance, to run as "1st No. 15," intending to run regular No. 15 as second section, but before the order can be executed regular No. 15 loses right and class, so that, when "1st No. 15" is ready to go, No. 15 is twelve hours overdue in arriving, but is yet not twelve hours late in leaving. Under such circumstances, may "1st No. 15" proceed?*

ANSWER. There is nothing to prevent "1st No. 15" from leaving, and the signals displayed by it would govern inferior trains; but the rule will not permit regular No. 15 to run as second section, however.

*Question Number 333. To avoid a misunderstanding, and possibly an accident, how should the dispatcher have handled the case?*

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\*See Appendix.

ANSWER. If, when he found that regular No. 15 was likely to become twelve hours late, he had annulled it, say between A and C, he could then have started the train from the branch as the first section of No. 15 from C, allowing the crew which was running No. 15 (until annulled) to follow as the second section, upon their arrival at C. Or he might have annulled No. 15 between A and C and then ordered the same crew to run as No. 15 from C, if No. 15 could leave C before becoming twelve hours late on its leaving time.

LECTURE. In such case it is best to deal with but one regular train; misunderstandings cannot then arise. If the dispatcher complicates the matter by adding sections, or takes the schedule from one crew and gives it to another, he must go still further and provide the necessary safeguards to meet conditions thus created, and which are not contemplated by the rule.

*Question Number 334. If a train which holds an order annulling some other train itself loses right and class and is then run extra, or as some other inferior train, does it again require the annulment order?*

ANSWER. No; for the reason that when a train is once annulled it cannot be restored. If at any time an engineman has not received the annulment order, he should be given a copy.

*Question Number 335. If a regular train, having received slow-orders, afterward loses right and class and is run extra, and the dispatcher overlooks reissuing the slow-orders, should he be reminded of*

*the oversight, or, if this is not done, must such orders be respected even if their renewal were forgotten at the time the order was given to run extra or as some other regular train?*

ANSWER. Orders held by or issued for a train become void when such train loses right and class; but as slow-orders are more in the nature of special instructions issued in the form of an order to insure that they are correct and properly delivered, it would be better to respect them, even if not re-issued, or at least to remind the dispatcher of the oversight and have an understanding about them.

*Question Number 336. Would an order or message to the effect that such slow-orders must be retained and respected be sufficient?*

ANSWER. Yes.

## MOVEMENT OF TRAINS.

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83. A train must not leave its initial station on any district, or a junction, or pass from double to single track, until it has been ascertained whether all trains due, which are superior, or of the same class, have arrived or left.

*Question Number 337. What must the conductor ascertain before leaving initial stations on each district, or a junction, or passing from double to single track, or before passing any registering station?*

ANSWER. He must know, by consulting the train register, that all trains due, which are superior to, or of the same class as, the train he is running, have arrived or left.

*Question Number 338. Why is it necessary for him to know that trains of the same class have arrived or left?*

ANSWER. In the case of trains of the same class, moving in the same direction, he must know whether they have left, in order to keep the proper distance behind them. In the case of opposing trains of the same class, if his train is of superior direction and the opposing trains have not arrived at his initial station, his train must run, expecting to meet such overdue trains at any station where



they can clear it; and until they are met, his train must approach all stations prepared to stop, unless the switches are right and the track clear. If his train be of inferior direction, it must, of course, await the arrival of trains of superior direction then due.

*Question Number 339. Should dispatchers furnish the train of superior direction the annulment order of trains of the same class in the opposite direction, when annulled, to relieve the superior train from having to approach stations prepared to stop?*

ANSWER. It would be well to do so.

*Question Number 340. If the initial station is on double track and the register at such station is checked and found to be clear, is it necessary to stop at the end of the double track to again check for the same trains?*

ANSWER. Yes. The register at the end of the double track must be checked by all trains passing from double to single track, for the reason that signals for following sections may have been displayed to such point and taken down there, and the train-register then depended upon to protect the following sections.

*Question 341. May the dispatcher relieve conductors from stopping to check registers at the end of double track, or elsewhere, by notifying them by message that such registers are clear?*

ANSWER. Dispatchers may relieve conductors from stopping to check registers at any time when necessary by issuing a train order; ordinary mes-

sages may be unreliable and not say what the dispatcher intended. The train order may say, "No. . . will not register at C. It checks clear." If the register is not clear, the order may read, "After 2d No. 15 arrives at C register will check clear."

*Question Number 342. Upon what page must trains be registered?*

ANSWER. Regular trains must register on the page corresponding with the date the train is due to arrive or leave, regardless of when it actually arrives or leaves. Extra trains, in or out, must register on the page corresponding with the date they actually arrive or leave. There must be a page for east-bound trains and one for west-bound. One page should be used for each day's business. To enable this plan to be carried out, train-registers should be made to accommodate an average day's business. [A design for a clear, concise train-register will be found in the Appendix, Form 54.]

*Question Number 343. Should there be no train-register at the point where the train starts, after tying up over night, how may it be ascertained that all overdue regular trains have arrived or left?*

ANSWER. The dispatcher must issue an order reading, "All regular trains overdue at C have arrived or left, except . . . . . ." This may be added to the order to run or work.

*Question Number 344. After the conductor has checked the register, must he advise each of his enginemen whether all trains have arrived and departed, and in what way?*

ANSWER. He must advise them by delivering to each a copy of Form 52 properly filled out. Should there be no such form in use, he must acquaint them verbally.

*Question Number 345. Should the conductor fail to do so, what is required of enginemen?*

ANSWER. They must not leave the station until they have themselves checked the register.

NOTE.—Men who are being examined for promotion to positions of conductors or enginemen must be required to check registers, to verify their ability to do so.

83 (A). A train must not leave its initial station on any district without a train order, or a clearance card, Form A.

A train must not leave a register station until the conductor has checked the register, filled out Form 52 and personally delivered the same to each of his enginemen.

*Question Number 346. Before a train leaves its initial station, or a district terminal, what must be obtained?*

ANSWER. A train order addressed to it, or a clearance card stating over the operator's signature that he has no orders for it. District terminals are initial stations for all trains,

*Question Number 347. Would a slow-order addressed to "all concerned" be sufficient under Rule 83 (A)?*

ANSWER. The engineman, at least, should have something establishing the train's identity. A "19" order delivered to him addressed to "all concerned" would still leave him in doubt as to the number of

his train, as trains do not always run out as called. Enginemen may accept the conductor's word, but it would be better to also issue a clearance card with such orders. A "31" form, the conductor signing the order and endorsing on it his train number, would be sufficient.

*Question Number 348. May an order addressed to "all concerned," "all freights," or "all trains east," be accepted as a clearance from initial stations if not dated the day the train leaves?*

ANSWER. An order so addressed may be accepted though not properly dated, provided the operator endorses in the "complete" column the correct date upon which the order is completed for the train using it, which must correspond with the date the train leaves or is due to leave.

*Question Number 349. If train No. 1 is due to leave its initial station at 11.30 p. m., and an order on the "19" form is issued for it before midnight, but, on account of the train being late, is not delivered until after midnight, may such order be accepted as a clearance?*

ANSWER. Yes. It is an order for a particular train, and if held by such train is sufficient evidence that the conductor has reported and received all orders issued for that train; this is all that the rule seeks to accomplish. An order to run extra, or one creating sections, is sufficient to clear the trains concerned.

*Question Number 350. Should there be a train-order signal at the initial stations or district ter-*

*minimal, and it be displayed at "stop," would an order affecting a train allow it to proceed without a clearance card also being delivered to it?*

ANSWER. No.

*Question Number 351. Must all clearance cards be timed?*

ANSWER. Yes.

84. A train leaving its initial station on each district, or leaving a junction, when a train of the same class in the same direction is overdue, will proceed on its schedule, and the overdue train will run as prescribed by Rule 91.

*Question Number 352. May trains leave their initial stations, or junctions, in advance of an overdue train of the same class moving in the same direction?*

ANSWER. Yes.

*Question Number 353. How must the overdue train run?*

ANSWER. As prescribed by Rule 91, keeping five minutes or more behind the train ahead.

*Question Number 354. May an overdue train pass a train of the same class, when overtaken?*

ANSWER. Not under the Code rules, unless the train be overtaken at a station where it has two times given and where it may be passed without infringing on its time-table time. A still more liberal understanding may be had: for instance, should a train have but one time at a station and its schedule be such as to allow it to arrive at that station in advance of its leaving time, any following

inferior train, or train of the same class, overtaking it at such station may pass it, provided its leaving time is not infringed upon; but should an inferior train pass a superior train under such circumstances it must thereafter keep clear of the superior train's time. Between trains of the same class this is not required, and the train which passes may proceed without regard to the train following.

LECTURE. Under the Code rules, one regular train cannot pass another of the same class on the road without a train order to do so, unless the train passed has "dead time" at a station and the following train can pass and leave such point before the train which is passed is due to leave. Once ahead, the trains continue to run in that relative position, and the following train cannot in its turn pass the train ahead, unless it can do so at a station where such train ahead may be waiting because not due to leave. One extra train cannot pass another, however, without a train order.

The only exception to the rule above stated is when a train is found disabled; then in that case any following train may pass it, exchanging right and class when necessary. Believing this rule to be burdensome (although perhaps technically correct) on roads having few telegraph stations, the Code rules have been modified by adding Rule 93 (A), which allows extra trains to pass each other and gives the same privilege to regular trains of the same class.

Where Rule 93 (A) is not in effect, the question is sometimes asked if an order instructing a train to run a certain number of hours or minutes late

may be construed to be authority for any following inferior train, or train of the same class (having copy of the order) to pass it, should it be overtaken and there be an ample margin of time to do so and clear the later time.

As an order for a train to run later than its schedule has the effect of changing such train's schedule for the time being, it would seem that any following train may find sufficient authority in such an order to pass the train that is running late.

There is not much in the contention that it is unsafe to allow one train to pass another of the same class, without authority from the dispatcher, since Rule 94 authorizes it and the movement may be made under this rule without the dispatcher's knowledge or consent.

85. A train must not start until the proper signal is given.

*Question Number 355. Rule 85 says, "A train must not start until the proper signal is given." May trains leave a station on signal from yardmen?*

ANSWER. No. Such signals are to be given and obeyed only for movements within yard limits.

*Question Number 356. May a train be started from a telegraph station by air-whistle signal only?*

ANSWER. No. It may be used to attract the engineman's attention, but the train must be signalled to start by a hand or lamp signal given personally by the conductor.

*Question Number 357. Why is an air-whistle or bell-cord signal to start unsafe at telegraph stations?*

ANSWER. The conductor may be in the office acknowledging an order which would hold his train, and the air-signal might be given by some one through ignorance or misunderstanding, and when the order signal is restored to "proceed" there would be nothing to prevent the engineman from starting, before the conductor could reach him with the order to wait.

*Question Number 358. On long freight trains, especially by night, is it always practicable for the conductor to personally signal the engineman in such manner as to satisfy him that the signal is given by the conductor?*

ANSWER. It is not, and in the case of long freight trains, on curves, during snow or fog, or on account of other obstructions, an exception may be made. But the signal must originate with the conductor, and may be passed to the engineman by the brakemen on the train. By night, the engineman of a freight train should not accept a signal from a brakeman who is not on top of the train, especially if there be other trains at the station, or there are yard-men at such point.

85 (A). A freight train must not pass any station or siding without its engineman receiving a "proceed" signal from the rear end.

*Question Number 359. May a freight train pass any station or siding without its engineman receiving a "proceed" signal from the rear end?*

ANSWER. No.

*Question Number 360. If not so received, what must the engineman do?*



ANSWER. He must call for it, and if he then does not receive it, he must stop and ascertain the cause, taking into consideration that the train may be broken in two, and so stop that the rear portion will not collide with the cars ahead.

*Question Number 361. If signalled to proceed, how must the engineman answer?*

ANSWER. By two long blasts of the engine whistle.

*Question Number 362. If stop-signal is given, how must it be answered?*

ANSWER. By two short blasts.

*Question Number 363. What are some of the advantages of this rule?*

ANSWER. The conductor may have received instructions to take or leave cars at a certain station and may not have been able to get word to his engineman before reaching the station, and unless the engineman looks back for a signal the conductor could not signal him to stop. Or, the engineman may overlook an order; the train-order signal may be at stop and not observed; he may be on short time; his watch may be slow or stopped; or, to prevent an accident, the operator may display the order-signal at "stop" after the engineman has passed it; and so, by requiring the engineman to get a signal from the rear of the train the conductor could stop the train. Also, a signal from the rear assures the engineman that his train is not broken in two, and that the men are attentive to duty.

LECTURE. At telegraph stations where a train has stopped, the engineman should receive a signal from the rear, after starting and after the rear of the train has cleared the order-signal, to assure him that no one has been left, and to prevent the train from getting away from such stations while the conductor is in the office acknowledging orders, or for some other reason is waiting.

86. An inferior train must keep out of the way of a superior train.

*Question Number 364. Are inferior trains required to keep out of the way of superior trains?*

ANSWER. Yes.

LECTURE. This refers to inferiority without regard to class. If No. 2 is superior to No. 1, a train of the same class, No. 1 must clear No. 2's time, pulling in on the siding. Between opposing extras, the inferior extra must take the siding at the meeting point. When a train is scheduled to pass another of the same class, the train to be passed must clear the main track at the passing point, or otherwise arrange so as not to delay the superior train.

87. A train failing to clear the main track by the time required by rule must be protected as prescribed by Rule 99.


*Question Number 365. If a train fails to clear the main track by the time required by rule, must it be protected, and in what manner?*

ANSWER. It must be protected as prescribed by Rule 99.

*Question Number 366. May a train stop at a water-tank between stations, at railroad crossings, or at unusual places within yard-limits, without protecting its rear?*

ANSWER. Not if in position to be overtaken. A train must always be protected, whenever there is any likelihood of another train running into it, unless the rule is modified by special instructions.

LECTURE. To show how necessary it is to construe this rule literally, one case will be cited where an accident resulted under circumstances where it would seem that protection ought not to have been necessary to prevent it. There is a road operating under these rules which is nearly all curves except at one place, where there is straight track for about ten miles. A freight train was delayed on the straight track, and an engine, running light, came up behind it and stopped. Notwithstanding a first-class train was then overdue, the crew of the light engine failed to go back at once to protect it. When it was observed that the first-class train was approaching under full speed an effort was made to stop it, but it was then discovered that there were no stop-signals at hand, and as the engineman of the first-class train was not keeping a proper lookout, the light engine was struck and driven into the freight train ahead of it. The light engine was in position to be run into, and should have been protected; the crew of such engine should not have assumed that, as they could be plainly seen, protection was not necessary. Had proper stop-signals been kept at hand, ready for immediate use, instead of depend-



ing upon a marker lamp, which was found not to be burning, the accident might have been averted. The engineman of the passenger train may have thought it unnecessary to be so alert on straight track, or may have fallen asleep. A torpedo would have attracted his attention.

88. At meeting points between trains of the same class the inferior train must clear the main track before the leaving time of the superior train, and must pull into siding when practicable. If necessary to back in, the train must first be protected, as prescribed by Rule 99, unless otherwise provided.

*Question Number 367. At meeting points between trains of the same class, which train must take the siding; in what manner; and how much must the time of the superior train be cleared?*

ANSWER. The inferior train must pull into the siding at the initial switch and clear the main track before the leaving time of the superior train.

*Question Number 368. What is a correct understanding of a proper clearance under such circumstances?*

ANSWER. Clearing the leaving time of the superior train means for the inferior train to be on the siding, with the entire train clear of the main track, and switches locked for the main track, before the superior train is due to leave the station.

*Question Number 369. If unable to pull in at the initial switch, may the inferior train pull ahead to back in without first sending out a flagman to protect it, as prescribed by Rule 99, even if only to*

*a cross-over which may not be beyond the station building?*

ANSWER. If the inferior train passes the initial switch against the superior train, the movement must be fully protected.

*Question Number 370. Would protection be necessary if the superior train were not due at such station at the time of the inferior train's arrival at the initial switch?*

ANSWER. The rule purposely makes no exception; the movement must be fully protected, as prescribed by Rule 99, unless otherwise provided, as the superior train is likely to drift down to the initial switch ahead of time; the rules even allow it to do so.

89. At meeting points between trains of different classes the inferior train must take the siding and clear the superior train at least five minutes, and must pull into the siding when practicable. If necessary to back in, the train must first be protected as prescribed by Rule 99, unless otherwise provided.

An inferior train must keep at least five minutes off the time of a superior train in the same direction.

*Question Number 371. At meeting points between trains of different classes, which train must take the siding; in what manner; and how much must the inferior-class train clear the time of the superior-class train?*

ANSWER. The inferior-class train must pull into the siding at the initial switch and clear the time of the superior-class train at least five minutes.

*Question Number 372. If necessary to pass the initial switch to get out of the way, what precautions must first be taken?*

ANSWER. The movement must be protected, as prescribed by Rule 99, unless otherwise provided.

*Question Number 373. What should be the understanding of "at least five minutes" clearance?*

ANSWER. That the inferior-class train must be on the siding, clear of the main track, with switches locked for the main track, at least five minutes before the leaving time of the superior-class train.

*Question Number 374. Would it be complying with the rule to simply arrive at the switch five minutes before the superior-class train is due to leave?*

ANSWER. No. The inferior-class train would not then have time to protect itself fully against the superior-class train if the switch should be found to be defective, or the train break in two in pulling into the siding; or if there be cars on the siding and the train be unable to pull in to clear.

*Question Number 375. How many minutes must an inferior train clear a superior train going in the same direction?*

ANSWER. At least five minutes.

90. Trains must stop at schedule meeting or passing stations, if the train to be met or passed is of the same class, unless the switches are right and the track clear. Trains should stop clear of the switch used by the train to be met or passed in going on the siding.

When the expected train of the same class is not found at the schedule meeting or passing station, the

superior train must approach all sidings prepared to stop, until the expected train is met or passed.

*Question Number 376. What is required of the superior train at meeting or passing stations where it is to meet or pass inferior trains of the same class?*

ANSWER. It must stop at such schedule meeting or passing stations, unless the switches are right and the track clear.

*Question Number 377. Does this also apply to second- and third-class trains? Or must the superior second- or third-class train stop where it is scheduled to meet or pass an inferior train of the same class, unless the switches are right and the track is known to be clear?*

ANSWER. It applies to all trains of the same class.

*Question Number 378. If a superior train is late and has received no orders to run late, or to wait for an inferior train of the same class, must it then stop?*

ANSWER. It is not then necessary. If late, and not ordered to wait for the inferior train, or is ordered to run late, the inferior train must either be in to clear the time-table time of the superior train, or else it must be protected.

*Question Number 379. At which switch must the superior train stop?*

ANSWER. It must stop clear of the switch that is to be used by the train to be met or passed in going on the siding.

*Question Number 380. If the train to be met or passed is not found at the schedule meeting or passing station, how must the superior train of the same class approach all sidings until the expected train is met or passed?*

ANSWER. It must approach the sidings prepared to stop.

*Question Number 381. What is the reason for this precaution?*

ANSWER. The inferior train is required by rule to clear only the leaving time of the superior train of the same class. This rule is intended to safeguard Rule 88. A slight variation in watches might cause an accident if the superior train were permitted to pass stations at full speed, totally disregarding the inferior train. There being no time allowance for clearance between trains of the same class, the superior train must use precaution.

*Question Number 382. Why is not the same precaution necessary between trains of different classes?*

ANSWER. There is a clearance of five minutes allowed between trains of different classes; this is ample to cover variations and allow time for proper protection, if the train fails to clear as required by rule.

*Question Number 383. If the conductor were on the rear of the inferior train of the same class and unable to get his entire train in to clear, on account of other trains ahead, or the siding being too short, would he be relieved from protecting the rear against the opposing train, even though it be a*



*meeting point fixed by train order, and the conductor is aware that his engineman has his headlight displayed?*

ANSWER. No. The conductor must see that the rear of his train is protected, should it not clear the main track. The superior train might think the opposing train was clear of the main track when it was not entirely so, and collide with it.

*Question Number 384. When a train is scheduled to pass another of the same class, must the train which is to be passed pull into the siding and wait indefinitely, unless moved by train order?*

ANSWER. Yes. It is a time-table command and must be so understood. If the train to be passed does not respect the superior train's precedence, there is no use in indicating passing points in a time-table.

*Question Number 385. If the passing point be a blind siding, what should the conductor of the train to be passed ascertain before taking his train to such station?*

ANSWER. He should confer with the dispatcher at a telegraph office and get information as to whether the train scheduled to pass is on time.

*Question Number 386. Should the train (of the same class) which is to pass fail to arrive at the blind siding within a reasonable time, may the train which is to be passed, and which may be called the inferior train, proceed without a train order to do so?*

ANSWER. An accident would not result if it were to go to the next open telegraph office and report for orders to run ahead of the train of the same class which was scheduled to pass it.

*Question Number 387. The rule says, "when the expected train of the same class is not found at the passing station, the superior train must approach all sidings prepared to stop, until the expected train is passed." If the train which is to be passed must wait indefinitely at the passing station, why was the rule so worded as to lead to the inference that the train may precede the following train until actually overtaken?*

ANSWER. A train order may supersede a rule. Should the train which is to be passed receive, say, an order that the train which is scheduled to pass it would run one hour late, such order would be understood to make the time of the train scheduled to pass one hour later, and the train which is to be passed could then go to any station that it can reach ahead of the superior train and clear its later time, as it was before required to clear the superior train's time-table time.

91. Unless some form of block signals is used, trains in the same direction must keep at least five minutes apart, except in closing up at stations.

*Question Number 388. How far apart must trains in the same direction keep?*

ANSWER. At least five minutes, except in closing up at stations, unless some form of block signal is used, or other instructions are given.

*Question Number 389. Should track and bridge foremen give a signal when trains are seen following each other too closely, and in what manner?*

ANSWER. They should notify the following train by giving an easy slow-down signal and pointing ahead; their meaning may be still further made plain by holding a watch in hand. Trainmen and enginemen should thereby understand that they are following a train too closely and be governed accordingly.

LECTURE. The question is often asked by block-signal operators as to when they may understand the block to be clear; is it clear when the train has arrived between switches at their station and has passed their order signal; or is the block occupied until the train has left their station?

The block is clear when the train is on the siding clear of main track, or when its caboose has passed the train-order signal; but, after passing the order signal, should the train stop to do work or meet trains, the operator must, in advising the operator at the next station in its rear that the block is clear, also instruct him to notify the following train that the first train is still at his station, should such train be only a short distance beyond the order signal, or should there be any possibility of a rear collision on account of grade or storm. Also, when a train is on a siding, the operator, before he clears the block in its rear, should warn such train not to again occupy the block. It might attempt to do so by backing out on the main track without first sending out a flagman. But it is not to be understood by this that the trainmen and enginemen are in any

way relieved from protecting their train as an additional safeguard. All trainmen and enginemen must distinctly understand that they must approach all block stations prepared to stop before passing the block signal, as the block ahead may not be clear. In stormy weather, extra precautions must be taken and operators and dispatchers must be on the alert for unsafe conditions and must *know* that the block is unoccupied, and that all trains are clear of the main track at the next block station in advance, before permitting wedge-plows or snow excavators to enter a block.

The above instructions apply more particularly where operators space trains with their train-order signal on heavy grades, or during snow or fog, and not to regularly established blocking plants which have standard rules to govern them.

91 (A). Unless under control, no train may pass another train which is standing at a station to receive or discharge passengers. The whistle (14 (n) ) must be sounded and bell rung by the approaching train. Trainmen and station employes must make every effort to keep persons off the track and warn them of the danger of attempting to cross in front of a moving train.

*Question Number 390. When a train is standing at a station where its passengers are being received or discharged, or taking meals, how must all other trains approach and pass?*

ANSWER. They must be under control, sound one long and one short blast of the whistle and ring the engine-bell. If necessary for the approaching train to pass between such train and the station or

hotel, extra precautions must be taken, and a man sent ahead to keep persons off the track, if the circumstances so require.

*Question Number 391. What is required of the employes of such train and others about the station?*

ANSWER. They must make every effort to keep persons off the track and warn them not to attempt to cross ahead of the approaching train.

92. A train must not arrive at a station in advance of its schedule arriving time, except as provided in Rules 88 and 89.

A first-class train must not arrive at a station where only the leaving time is shown, more than five minutes in advance of its schedule leaving time.

A train must not leave a station in advance of its schedule leaving time.

*Question Number 392. When but one time is shown for a train at a station, what is it?*

ANSWER. Its leaving time, unless otherwise indicated.

*Question Number 393. If two times are given, what are they?*

ANSWER. The arriving and leaving time.

*Question Number 394. May a train arrive at a station in advance of its schedule arriving time?*

ANSWER. Not unless necessary to arrive five minutes in advance in order to clear a superior-class train; or to allow a following section to properly clear.

*Question Number 395. If a first-class train has only a leaving time given at a station, how much in advance of such time may it arrive?*

ANSWER. Not more than five minutes.

*Question Number 396. Are second or third-class trains forbidden to arrive at stations ahead of time where they have only a leaving time given?*

ANSWER. The rules do not prohibit such trains from arriving at such stations sufficiently in advance of their leaving time to do their work and get out on time, but reckless running between stations to enable them to do so, or when approaching stations, is forbidden; inferior trains running ahead of them may use up to within five minutes of their leaving time to make stations to clear, and this must be taken into consideration by regular freights, and if they do approach a station in advance of their leaving time the train must be under control and a good lookout kept for work trains and others ahead. If they collide with a train and are running recklessly or much ahead of their schedule they will not be relieved from blame, notwithstanding the requirement that no train may occupy the main track at or between stations at any time without protecting its rear, whether regular trains are due or not.

*Question Number 397. If a first-class train is ordered to run one hour late, A to C, and it has an arriving and leaving time at C, how much late must it arrive at C?*

ANSWER. One hour late, technically speaking. A train running ahead of such train is entitled to use all of the additional time, except the clearance that is required when running ahead of such train by time-table without orders.

*Question Number 398. If a first-class train has but one time at a station and is running one hour late by special order, when may it arrive at such station?*

ANSWER. Not less than fifty-five minutes late, under the provision of the second paragraph of Rule 92.

*Question Number 399. If other than first-class trains are directed to run late, how does it affect their arriving time at stations?*

ANSWER. If they have an arriving and leaving time, they must not arrive in advance of the time named in the order; if only a leaving time, they may arrive as much ahead of the "run late" time as they previously were allowed to arrive in advance of their time-table time.

*Question Number 400. What must be understood by trains which receive copies of the "run late" orders?*

ANSWER. They must understand that while, technically, they have the right to use all of the additional time, except the clearance required by rule, in practice trains which have only a leaving time given at certain stations do sometimes drift into such stations ahead of the time named in their orders, and that, upon their arrival there, such trains would proceed at once, if their orders would permit. Therefore, trains which take advantage of the "run late" notice must not stop at such stations without protecting, even though the time given them over the train running late has not yet expired; for this reason, furthermore, there may be other trains run-

ning ahead of the train which is directed to run late.

*Question Number 401. May a train leave a station in advance of its schedule leaving time?*

ANSWER. Not unless so authorized by train order.

*Question Number 402. May dispatchers so order?*

ANSWER. Not without permission from proper authority.

LECTURE. Running a train in advance of its schedule has been found to contain so many elements of risk and has caused so much argument that the practice is generally prohibited on roads using the Standard Code rules, which do not contemplate such movement or provide forms for it. It may be contended that as it is not directly prohibited and that as train orders may be understood to be "special instructions" in some cases, the intent of the Code is not being violated when trains are authorized to run in advance of their time-table schedule. Theoretically the practice is inconsistent, but as it is known that some companies still permit it, the rights of trains while running ahead of time may be discussed, without arbitrarily taking the ground that it must not be done, but still with no disposition to favor it.

There can be but two kinds of trains: those on schedule and those authorized to run extra. A regular train passing stations in advance of its time-table leaving time is neither. When necessary to run a regular train in advance of its time-table



schedule for any considerable distance, it should be annulled and then run extra. There may not be serious objection to a train sometimes leaving one station ahead of time to meet some emergency that cannot be provided for in any other way, and it is desired to have such train retain its identity; or it may sometimes be required to run a section into a terminal in advance of the schedule from one or two stations, in order to avoid delaying important following sections, and when it would entail much extra work and delay to annul all the sections or change all orders affecting them.

There is always danger, however, of a train receiving a "right" order and a separate order allowing it to pass stations ahead of time, while the train over which it is given right may have received no notice that its superior train is running ahead of time; thus the train which is holding the "right" and "ahead-of-time" orders may pass stations in advance of its schedule before the inferior train is met. It is true that the order to pass stations ahead of time is not in effect until the train over which right is given has been met; but the order conferring "right" should specifically state also that the train thus given right will pass stations in advance of its time-table time; otherwise the train over which right is given may assume the superior train to be on its regular time and so go to any point that it can make and properly clear its time-table time. There might also be an accident under meeting orders. For instance, the opposing inferior train may pass the initial switch and pull ahead on the main track to do work, or to back in, even contrary to rule, without protecting. If the superior train to be met

is not yet due to leave the next station in advance, the inferior train, unless it has received notice that its opposing train is running ahead of time, may be occupying the main track. It is true that under such circumstances it has no right to do so, yet there is the chance that it may, notwithstanding.

There will be difference of opinion as to what kind of signals the train running ahead of time shall display; as to whether it is a regular train ahead of time, or an extra. There is no ground for assuming that a regular train directed to run in advance of its schedule is an extra; it is not created as such. If anything, it is a regular train ahead of time. It will be noticed that, should it become delayed and fall back on its schedule, such schedule could be again assumed by it. While it is running ahead of time it must clear all other regular trains at least five minutes, pulling into siding for them; and it must also pull into siding for extra trains which it may receive orders to meet, unless it is moving in the direction in which extra trains are superior at meeting points with each other on that district. If a section, the green signals must be displayed the same as if the train were running on its schedule; white signals must never be displayed.

## CHART NO. 2.

(Rule 92.)

*Order No 1.**C & E No 16. E.**C & E No 15. B.**No 15 will run B to E ahead of time with right over No 16.**Order No 2.**No 15 has right over No 16 B to E.**Order No 3.**No 15 will pass stations ahead of time.**Order No 4.**Extra 455 west has right over No 16 ahead of time, A to D.*

*Question Number 403. Under Chart No. 2, Order No. 1, may No. 15 leave B in advance of its schedule time?*

ANSWER. Yes.

*Question Number 404. May No. 16 leave E before No. 15 arrives there?*

ANSWER. No.

*Question Number 405. When No. 16 receives Order No. 1, No. 15 is not due to leave A; may No. 16 in that case go to D, or to any station that it can make and clear No. 15's time, until No. 15 is due to leave A?*

ANSWER. No. No. 15 may have been annulled between A and B, or have received a previous order to leave A ahead of time.

*Question Number 406. If No. 15 is delayed and falls back on its schedule, is the order to run against No. 16 still in effect?*

ANSWER. Yes. Orders remain in effect until fulfilled, superseded or annulled.

*Question Number 407. May the dispatcher run a train ahead of time in one order and give it right over some other train in another order, or fix a meeting point in another order, without also stating in the "right" or "meet" order that the train is running in advance of its schedule?*

ANSWER. No.

*Question Number 408. If an order is issued for a train to run ahead of time, and then another order is delivered to it giving it right over some train, should both orders be accepted and obeyed?*

ANSWER. Only with the understanding that the train which is given right shall not run ahead of its time-table time until the train over which it is given right is met.

*Question Number 409. "Extra 455 west has right over No. 16 ahead of time, A to D." If at this time No. 16 is authorized to leave D ahead of time, and then receives the above order, must it wait at D indefinitely for the extra, or does the order become void for No. 16 when it is due to leave D by time-table?*

ANSWER. Such an order is improper and should not be given. Under it the extra would have right over No. 16, and No. 16 must not leave the station last named in the order until the extra arrives. The order remains in effect and allows the extra to proceed against No. 16, whether it be ahead of time, on time, or late.

*Question Number 410. If a first-class train is instructed to pass stations in advance of its time-table time, must it take the siding for and clear all regular trains five minutes, or simply clear first-class trains and disregard others?*

ANSWER. Any regular train receiving orders to run ahead of time must clear all other regular trains at least five minutes, pulling into siding for them.

*Question Number 411. If a train ahead of time receives orders to meet an extra train, which one takes the siding?*

ANSWER. The rule governing extra trains would then apply. If moving in the direction in which extra trains are superior, the regular train would hold the main track. If running in the direction in which extra trains are inferior, the regular train ahead of time must pull into the siding.

CHART NO. 3.

**Order No 1.**

*No 15 will take siding and meet No 16 ahead of time at C.*

*Question Number 412. Why is the direction to take siding given in Order No. 1, Chart No. 3?*

ANSWER. To avoid the chance for misunderstanding in event of the train which is running ahead of time being a superior train and afterward falling back on its time-table time.

*Question Number 413. In the absence of designation as to which train shall take the siding, if*

*No. 16 were to fall back on its time-table time before reaching C, should it hold the main track or pull into siding?*

ANSWER. It should hold the main track if it is the superior train.

*Question Number 414. If No. 15 reaches C before No. 16 is due there, should it hold the main track?*

ANSWER. Yes.

*Question Number 415. If No. 16 is overdue when No. 15 reaches C, must No. 15 take siding?*

ANSWER. Yes, if, by rule, No. 15 is the inferior train.

LECTURE. It will be seen that when trains are run ahead of time and meeting points are fixed, in the absence of instructions as to which train shall pull into siding, the order may easily be misunderstood and both trains hold the main track. The dispatcher should anticipate this, and when running trains ahead of time indicate in meeting orders which train shall take the siding. In theory, No. 16 ahead of time has the rights of an extra train only, and while ahead of time must take the siding for No. 15; but should it be delayed and fall back on its schedule, it is then entitled to the main track over No. 15. If No. 15 receives an order to meet No. 16 ahead of time at C, and arrives at C *before* No. 16 is due, it is entitled to the main track; should it arrive *after* No. 16 is due, it must pull into the siding, or use the main track under protection of stop-signals, unless No. 16 is seen to be already on the siding.

93. A regular train which is delayed, and falls back on the time of another train of the same class, will proceed on its own schedule.

*Question Number 416. When a regular train is delayed and falls back on the time of another train of the same class, does it lose its authority to proceed, and must it get out of the way and allow such following train to pass?*

ANSWER. It proceeds on its own schedule.

*Question Number 417. Should it stop or be delayed, is it required to protect against the following train?*

ANSWER. Yes. The following train is not supposed to be aware that the train ahead is on its time. Dependence for safety is therefore placed upon the rule which requires all trains to be protected at all times if they stop or are delayed under circumstances in which they may be overtaken. It will be seen that an extra may get in the way of a following extra, or, under Rule 93 (A), an officer, passenger or preferred extra train may be running ahead of a second- or third-class train and no notice given such following regular train. The train which is delayed must protect itself.

93 (A). When designated as such in train orders, an "officer," "passenger" or "preferred extra" train may pass and run ahead of any train, except first-class.

Extra trains may pass and run ahead of each other.

Regular trains of the same class may pass and run ahead of each other; but sections of the same train must not pass each other, except as prescribed by Rule 94.

*Question Number 418. When designated in train orders as "officer," "passenger" or "preferred,"*

*what special privileges are conferred upon such extra trains?*

ANSWER. The right to pass or run ahead of any train, except first-class.

*Question Number 419. In case of dispute, or if other trains appear unwilling to allow such trains to pass, what should be shown?*

ANSWER. The train order creating them, an officer, passenger or preferred extra train.

*Question Number 420. If such extra train falls back on the time of a following second- or third-class train, must it clear it, or procure an order to run ahead of it?*

ANSWER. It may proceed ahead of such train without a train order authorizing it to do so; but should it stop or be delayed, it must protect its rear.

*Question Number 421. If an officer, passenger or preferred extra receives orders to meet extra trains not so designated, which one takes the siding?*

ANSWER. The words "officer," "passenger" or "preferred" give extras so designated the right only to pass or run ahead of all except first-class trains. It confers no further right as to meeting trains. The extra train so named must take the siding for other extra trains if it is moving in the direction in which extras are inferior on the district. They must pull into the siding and clear all regular trains at least five minutes.

*Question Number 422. May one extra train pass another when necessary?*

ANSWER. Yes.



*orders be selected as are needed to enable the overtaking train to pass and proceed?*

ANSWER. The exchange must be complete. The overtaking train assumes the identity of the disabled train, and must respect all its orders and be governed by everything it had pertaining to right or schedule or authority to proceed.

*Question Number 430. If the disabled train has lost right and class, must an exchange be made?*

ANSWER. It is not then a train, and may be disregarded.

*Question Number 431. If there should be a combination of orders, whereby an exchange of right or schedule would be necessary, but which would also temporarily tie up the overtaking train or delay trains elsewhere, what must be done?*

ANSWER. Make the exchange, if necessary, and if, later on, it may be of any use; but if both trains are held by their orders at the station where the disabled train is overtaken, neither can proceed.

*Question Number 432. If two trains are directed to meet a train at C and one of them becomes disabled at B, should the conductor of the disabled train accompany the train which passes him to C, or may the train which is being delayed at C be gotten out by sending word to it by the train which passes the disabled train?*

ANSWER. The conductor of the disabled train should accompany the train which passes it at B and return on the opposing train from C.

*Question Number 433. If there are trains waiting at blind sidings between the disabled train and*

*the next open telegraph office, what must the train which exchanges with and passes the disabled train do?*

ANSWER. It must stop, identify itself and explain the situation.

*Question Number 434. If a train were at a station holding an order to meet Extra 455, and Extra 420 arrived and its conductor explained that he had overtaken Extra 455 disabled and had exchanged orders with them, and showed his exchanged orders, would anything further be required to proceed against Extra 455?*

ANSWER. The waiting train having thus met Extra 455 under the rules, would require nothing further against it.

*Question Number 435. Why is the direction to "report at the next open telegraph office" given?*

ANSWER. In the case of extra trains, or sections, the orders would have to be annulled and reissued to correspond with the engine in the train. In the case of other trains, the dispatcher would thus be able to arrange as he deemed proper.

*Question Number 436. When ready to proceed what does the disabled train do?*

ANSWER. It assumes the schedule, or right, and takes the train orders, of the last train with which it has exchanged, and proceeds to and reports from the next open telegraph office.

LECTURE. While the rule makes no exceptions, should the disability occur at an open telegraph office where the matter can be arranged by the dispatcher, trains should not then exchange, but report

to him and get the necessary orders to permit the disabled train to be passed.

If a freight train should overtake a more important freight train, or a first-class train, whose engine has broken down, it should (if practicable) give its engine to the disabled train, instead of exchanging right and schedule, and thus allow the superior train to proceed. See Rules 736 and 979.

In operation it is desirable to place a somewhat more liberal construction upon the word "disabled" than may be found in its definition. Should a train be blocked in between other trains at a blind siding, delayed by reason of a defective switch, broken brass, loading or unloading stock, draw-head pulled out, coal or water failure, heavy tonnage, etc., or if because of work between stations it is unable to proceed against a superior train, any following section or inferior train should regard such train as one disabled and pass it, exchanging right or schedule if necessary, provided that when this is done the overtaking train can then proceed.

95. A train must not display signals for a following section, nor an extra train be run, without orders from the superintendent.

*Question Number 437. By what authority may a train display signals for a following section, or an extra train be run?*

ANSWER. Only by orders from the superintendent.

*Question Number 438. Should a train be found at a blind siding waiting for some other train, may a regular train display signals for it to help it out? If not, how should the matter be arranged?*

ANSWER. Signals must not be displayed. The waiting train may send a man on the regular train to the next telegraph station to hold the opposing train until the other can arrive; or, when safe, and a man cannot be spared, it may run to the next telegraph station ahead of the regular train if the latter has right or schedule allowing it to proceed; but it must be arranged, if necessary, in that case, to hold opposing trains until the regular train arrives at points where trains may be waiting and until the next open telegraph office is reached.

LECTURE. The train which is tied up must not delay an important train by running ahead of it arbitrarily. There must be a full understanding and explanation with all concerned.

The delayed train may run ahead of the superior train only to the next telegraph station. To precede it farther would be unsafe, because the dispatcher could hold the superior train at such station for opposing trains without advising the inferior train ahead of it.

Where many sections of trains are run daily, this rule is modified. Operators or yardmasters at initial stations are authorized to instruct trains to run in sections, thus relieving the dispatcher of a routine duty, which often delays trains if it is required of him. It also avoids the necessity of the dispatcher's having to annul "running orders" and issue new ones, should the wrong engine numbers be given him. As no inferior train can move against a superior train without a train order, and as sections of the same train cannot follow each other until it is ascertained, by examination of train-register at initial stations, that signals have been displayed for

them, there is nothing unsafe in creating sections in this manner. It has always been found to be more satisfactory than to have such instructions issued entirely by the dispatcher. These signal instructions are not repeated to the dispatcher or regarded as train orders. They may be issued over the initials of the chief dispatcher. The conductors sign them.

96. When signals displayed for a section are taken down at any point before that section arrives, the conductor will, if there be no other provision, arrange with the operator, or, if there be no operator, with the switchtender, or, in the absence of both, with a flagman left there for the purpose, to notify all opposing trains leaving such point that the section for which the signals were displayed has not arrived.

**NOTE.**—The Code rule reads, “to notify all opposing trains of the same or inferior class leaving such point.” Thus worded, it does not seem to fully provide for every condition. It may be contended that extra trains are not classified, therefore it is unnecessary to notify them when signals are taken down. Again, under Rule 218, it is not necessary to specify sections. No. 1 may be given an order to meet No. 16 at D, and, should there be two sections of No. 16 only as far as D, the Code rule permits the first section of No. 16, an inferior-class train, to take down its signals and relieves all employes from notifying No. 1, the superior-class train, made inferior to No. 16 by “right,” that there is a second section of No. 16, which, under the order, has all the rights of the first section as far as D. This technical oversight is found in Rule 14 (k), which has also been modified by the author to read “*or inferior right.*”

*Question Number 439. If ordered to display signals from A to D for a following section, or signals are taken down at D by the dispatcher, and there is an operator or switchtender at that point, what precautions must be taken by the conductor of the train*

*taking down signals, to protect the following section until it arrives?*

ANSWER. He must call the attention of all trains at D going in the opposite direction to the signals, also notify the operator or switchtender in writing that the section for which signals were displayed has not arrived and that orders were received to take down signals at that station.

*Question Number 440. When should the signals be taken down at D?*

ANSWER. They should not be taken down until (1st) No. 16 is ready to leave, and all trains due to meet No. 16 at D have arrived.

*Question Number 441. If there is a switchtender at such station, what is required of him?*

ANSWER. When notified by the conductor that signals have been (or are to be) taken down and the following section has not arrived, it is his duty to so inform all opposing trains leaving such station, until the section for which signals were displayed has arrived.

*Question Number 442. If the matter is entrusted to the operator, what must he do?*

ANSWER. He must display the order signal at "stop," and notify all opposing trains leaving the station, until the section arrives.

*Question Number 443. What is required of the conductor when signals are taken down at a point where there is neither operator nor switchtender to notify opposing trains leaving such station?*

ANSWER. If there be no other provision, the

conductor must leave a flagman to notify opposing trains.

*Question Number 444. The rule says "if there be no other provision"; what may be understood to be "other provision"?*

ANSWER. The dispatcher may provide otherwise and so advise by train order, or there may be a train-register at such station.

*Question Number 445. May the conductor arrange with a section foreman, or other responsible employe not mentioned in the rule, to notify opposing trains and thus avoid leaving a flagman at points where there are no switchtenders, operators or train-registers?*

ANSWER. The rule is mandatory, requiring, in such case, that one of the train's flagmen or brakemen be left.

*Question Number 446. If an engine is running light, with only a fireman, would it then be possible to comply with the provisions of the rule?*

ANSWER. The engine must then wait until the following section arrives, or have the dispatcher order the signals taken down at some other point where there is a switchtender, operator or train-register.

*Question Number 447. Would it be sufficient in such case to stop and notify all opposing trains, wherever met, and not leave a flagman at points where there are no switchtenders, operators or train-registers?*

ANSWER. The rule does not permit this.

LECTURE. Should the signals be taken down at a junction, the following section may arrive and go on to the branch, or it may have a round-trip order and arrive at and return from the station where signals were taken down; in either case opposing trains would thus be held indefinitely at the meeting point if it is not a registering station or no other positive notice is given of the following section's arrival. Or, the section for which signals were displayed may meet with accident and for some hours fail to arrive at the station where the signals were taken down; meantime, the train which displayed the signals, and took them down, may have reached the end of its run, and the crew have gone home and so not be in position to notify opposing trains. Also, to leave notice of the fact on a train-register which is not at the station where the signals were taken down would not always afford protection, as trains may receive instructions not to stop to check such register. In practice cases seldom arise under Rule 96. No instance is recalled by the author where the operator or switchtender was fully depended upon to notify opposing trains, or where a flagman was left for that purpose. Taking down signals and protecting the following section is manifestly a dispatcher's duty, and he should not depend upon the provisions of this rule to protect trains, but should make the movement safe by other means. The rule might apply should there be a wire failure; but, before directing a train to display signals to a certain point where there is no train-register that can be depended upon, or before taking down signals at any such station, the dispatcher should first issue the necessary safeguard in the form of a train order notifying all



opposing trains that would be affected. Trainmen and enginemen, however, should not infer from this that the rule does not mean just what it says, and all concerned must be held to a strict observance of it. At points where the train-register cannot be depended upon, by reason of some high-class or important train sometimes registering by train registering ticket, or where there is no train-register at all, the dispatcher must notify trains interested—and before they reach such station, if possible—that signals were displayed for a section which has not arrived. It ought not to be necessary to order a train to display signals to stations where there is no operator or train-register, thereby compelling the conductor to leave one of his men whose services may be needed to help move the train safely. It can generally be easily arranged to take down signals at telegraph stations and run the section for which they were displayed, extra, on a time-limit order, if desired, to the blind siding.

97. Work extras will be assigned working limits.

*Question Number 448. May work extras occupy the main track anywhere without a creating train order?*

ANSWER. No. They can work at or between stations only after receiving orders assigning their working limits.

NOTE.—Double-track Rule D97 reads, "Work extras will be assigned working limits. Within these limits such trains must move with the current of traffic unless train-orders otherwise direct."

98. Trains must approach the end of double track, junctions, railroad crossings at grade, and drawbridges,

prepared to stop, unless the switches and signals are right and the track is clear. Where required by law, trains must stop.

*Question Number 449. How must trains approach the end of double track, junctions, railroad crossings at grade, and drawbridges?*

ANSWER. They must approach prepared to stop, unless the switches and signals are right and the track is clear. Where required by law, trains must stop.

*Question Number 450. Are there any instructions with regard to making an air test, to insure that a train would be able to stop should necessity require?*

ANSWER. Yes. About one mile from such points there must be a test made, sufficient to know that the brake is working properly. See Rule 1704.

*Question Number 451. What is a "railroad crossing at grade"?*

ANSWER. A crossing where the rails of the crossing tracks are on the same level with each other. If one road runs under the other, it is not then a "crossing at grade."

98 (A). At obscure railroad crossings at grade where there are no signalmen or interlocking plants, one of the crew must precede the train and give a signal from the crossing, if safe to proceed.

*Question Number 452. Before crossing a railroad-crossing at grade, which is not protected by flagman or interlocking plant and where the view is obstructed, as by a curve, cuts, buildings, storm or darkness, what precautions must be taken?*

ANSWER. A flagman must go ahead of the train, and if safe to cross he must give a signal from the crossing for his train to proceed.

*Question Number 453. If protected by use of a gate, does this relieve the engineman from receiving a signal from the crossing?*

ANSWER. No. The signal on the gate may indicate "proceed" and at the same time a train be approaching on the other track and unable to stop. When derail-switches are interlocked, trains cannot collide, but when only gates are used it would be possible.\*

98 (B). Certain yards will be indicated by yard-limit signs. Within such defined limits, all trains, except first class, must reduce speed sufficiently to enable them to stop within the distance seen to be clear; and first-class trains must also proceed at reduced speed. No train may stop on the main track without protecting itself.

Unless fully protected, yard engines must not occupy the main track within ten minutes of the time of a first-class train; they are not required to protect against other trains, but must keep a proper lookout.

*Question Number 454. Certain yards are indicated by yard-limit signs. Within such limits, how must all trains, except first-class, proceed?*

ANSWER. They must approach and move within the yard under such control that they can stop within the distance seen to be clear.

*Question Number 455. Should the approaching*

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\*It is a good rule, and a law in some States, that trains should stop 500 feet from every level crossing unprotected by interlocking.

*train collide with a train within yard-limits, who would be held responsible?*

ANSWER. Responsibility for the accident would rest with the approaching freight or extra train which failed to run under such control that it could be stopped within the limit of vision.

*Question Number 456. How must first-class trains approach and pass through such yards?*

ANSWER. They must reduce speed sufficiently to be able to stop promptly should they be signalled to do so.

*Question Number 457. If a first-class or any other train or engine, except regularly assigned yard engines, is delayed or makes an unusual stop within such yard-limits, must it be protected?*

ANSWER. Yes. Yard-limit signs do not relieve such trains from protecting themselves.

*Question Number 458. What may be considered an unusual stop between yard-limit signs?*

ANSWER. Any stop on the main track.

*Question Number 459. What trains are yard engines required to keep clear of or protect against, and against what trains may they occupy the main track without protecting themselves?*

ANSWER. If yard engines occupy the main track within ten minutes of the time of a first-class train, they must protect themselves against it, as prescribed by Rule 99; they are not required to protect against other regular or extra trains.

*Question Number 460. May yard engines run at a high rate of speed on the main track within yard*

*limits, or otherwise totally disregard all safety precautions to prevent collision with other trains, especially during darkness, snow or fog, or where the view is obstructed?*

ANSWER. No. They must use judgment in occupying the main track and keep a proper lookout, notwithstanding the burden of responsibility for accident rests with the approaching freight or extra train. They must not pass through a cross-over from behind cars or other obstruction in such a manner as to make it impossible for an approaching train to avoid striking them, when such approaching train can see for some distance ahead and has every reason to assume that the track is clear for them; the crew on the switch-engine would then be responsible for any accident that might result, provided the approaching train was properly under control.

## PROTECTION OF TRAINS.

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99. When a train stops or is delayed, under circumstances in which it may be overtaken by another train, the flagman must go back immediately with stop-signals a sufficient distance to insure full protection. At a point one-fourth of a mile (ten telegraph poles) from rear of his train he must place one torpedo on the rail, then continue back at least one-half mile from the rear of his train and place two torpedoes on the rail, two rail-lengths apart, when he may return to the single torpedo, where he must remain until another flagman takes his place, or until recalled by the whistle of his engine. When he returns to his train he will remove the single torpedo.

In foggy or stormy weather, and in the vicinity of curves or on descending grades, the distance and number of cautionary signals must be increased, placing them uniformly every fourth of a mile.

Should a train be seen approaching before the flagman has been able to get back the required distance, he must place one torpedo on the rail if the engine-man fails to acknowledge his other stop-signals before reaching him.

When there is not a clear view for one-fourth of a mile in rear of train, the flagman must not be recalled until the entire train is in motion. The train must then be moved ahead at not less than six miles an hour until it reaches a point where there is a clear view for one-fourth of a mile in its rear.

By night, or when the view is obstructed by fog, snow, or otherwise, the flagman must use red fuses

to assist in protecting his train, especially while returning to it.

When a train is flagged, the engineman must obtain a thorough explanation of the cause, stopping if necessary.

The front of a train must be protected in the same way, when necessary, by the front brakeman. If the front brakeman is unable to go, the fireman must go in his place.

NOTE.—Have the person who is being examined repeat Rule 99 as nearly as he can.

*Question Number 461. What constitutes a flagman's equipment for daylight flagging?*

ANSWER. A red flag and twelve torpedoes. If it is storming, he must also have at least three red fuses.

*Question Number 462. What must the flagman provide himself with by night?*

ANSWER. A red and a white lantern, twelve torpedoes and at least three red fuses.

*Question Number 463. Why must two lights be taken, and may green fuses be used in such cases?*

ANSWER. One light may fail. The flagman must never take green fuses when going out to stop a train. Green fuses must be kept separate from the red, and where they will not be likely to be picked up by men who have to protect trains.

*Question Number 464. When a train needs protection, must the flagman go out at once, or may he wait to be sent out by whistle signal or instructed to go by the conductor?*

ANSWER. He must go at once, whenever his train slows down or stops where it may be overtaken.

*Question Number 465. Must the engineman sound the whistle to send out a flagman when his train needs protection?*

ANSWER. Yes. He is in better position than any one else to determine when this is necessary; steam may fail, stalled trains or other obstructions may be seen ahead, or trackmen or others may give a signal to stop.

*Question Number 466. Should the engineman fail to give signal to send out a flagman and an accident result, would he participate in responsibility, and should he complain when he is disciplined for the neglect?*

ANSWER. Enginemen are justly held responsible for any such violation of the rules. Their whistle may prevent an accident or the flagman may be forgetful or drowsy. It is not so much a question of fixing the responsibility for loss of life or property as it is to prevent it.

*Question Number 467. How far must the flagman go back, and how must he protect the train?*

ANSWER. He must go back as far as is necessary to insure full protection, taking into consideration the grade, the condition of the rails and the consequent ability of the approaching train to make an effective stop. At a distance of one-fourth of a mile (ordinarily, between eight and ten telegraph poles) from the rear of the train he must place one torpedo on the rail, and then continue going back for another fourth of a mile, and there place two torpedoes on the rail, two rail-lengths apart. If this distance is as far as may be necessary for him to go back to



insure that the next train will be stopped in season, and no train then is seen or heard approaching, he may then return to where he first placed a single torpedo on the track.

*Question Number 468. But if a train is seen or heard, what must the flagman do?*

ANSWER. He must not return toward his own train, but, instead, must remain or go back further and signal the approaching train to stop.

*Question Number 469. After returning to the single torpedo and standing there, when may the flagman go to his train?*

ANSWER. When relieved by another flagman or when recalled by the whistle signal of his engine.

*Question Number 470. If an engine running light or any other train should answer the flagman's stop-signal, but be unable to stop until after passing him, may he consider that he is relieved and so follow such train in?*

ANSWER. No. He must wait until the flagman of such train takes his place. It may even be necessary for him to continue going back to protect such train until its own flagman is able to do so.

*Question Number 471. If the engineman of an engine running without a train crew or cars should be flagged, but be unable to stop before passing the flagman, should he move his engine toward the flagman to ascertain what he was flagged for, or should he send out his fireman to relieve the flagman and wait for him to come to the engine, or for his fireman to return with the explanation?*

ANSWER. He must not back his engine, but may send his fireman back to ascertain the cause, and, if necessary, may require the flagman to protect his engine also.

*Question Number 472. If the flagman stops an approaching train before it passes him and explains to the engineman the reason for flagging, is he then relieved?*

ANSWER. Yes, he is relieved; but he should, when practicable, assure himself that the train which he stopped has sent out its flagman; and duty requires that this should be done at once.

*Question Number 473. If a flagman is protecting a work extra when a first-class train is due, and he sees his own train take a siding at a station, may he then allow the first-class train to pass without stopping it to explain what he is protecting?*

ANSWER. He must stop all trains, unless previously instructed to the contrary by his conductor; for the work extra may again occupy the main track, depending upon its flagman to notify trains.

*Question Number 474. If a flagman, while standing at the single torpedo which he first placed upon the rail, is recalled, must he take up the single torpedo, or place another two rail-lengths from it?*

ANSWER. He must, when necessary, as in case of snow, fog, or when the view is obstructed, place a second torpedo two rail-lengths from the first; he should never leave a stop-signal on the rail and then return to his train, as the train which it stops would have to flag ahead, no one being at hand to explain.

*Question Number 475. Should a train be seen approaching before the flagman has been able to go back one-fourth of a mile and place one torpedo on the rail, what is required of him?*

ANSWER. He must always place the stop-torpedo on the rail before the train passes him, and not depend upon his being able to stop it by signalling as it passes; except, of course, that he may remove the torpedo after signalling the train to stop and he receives an answer and sees that the train is actually stopping.

*Question Number 476. Must there always be two kinds of signals used to stop a train—audible and visible?*

ANSWER. Yes, so that the engineman, or others on the train, will not fail to see or hear at least one of them.

*Question Number 477. If a flagman is recalled before he has gone back one-half mile from his train and has placed the caution-signal, what must he do?*

ANSWER. If a train is then seen or heard approaching, he must go toward it and signal it to stop. If no train is seen or heard, he may return to his train, but must first attach two torpedoes to the rail, two rail-lengths apart. If the conditions are such as to make it necessary he must still go back the required distance and place the caution-signals, the same as he would have done had he not been recalled.

*Question Number 478. Is one-half mile as far as flagmen are required to go back in all cases?*

ANSWER. No. The rule says he must go back as far as is necessary to insure full protection.

*Question Number 479. If the weather is foggy, or it is raining or snowing, or the train is on a descending grade, or in the vicinity of curves where the view is obstructed, how far back should the flagman go and how should he set the torpedoes?*

ANSWER. Starting from the half-mile point where he places two torpedoes, he should continue back a mile, or a mile and a quarter if necessary from the rear of his train, placing cautionary torpedoes on the rail every quarter of a mile. The idea is to have a frequent and uniform repetition of the cautionary (two torpedoes) signal. The stop-signal, or one torpedo, is placed one-fourth of a mile from the train or other obstruction, and then cautionary torpedoes should be placed every fourth of a mile thereafter.

LECTURE. Yes, the flagman is required to go back a mile and a half if necessary, placing his torpedoes uniformly. To place one one-fourth of a mile from the train, and then go back a mile, or over, and place two on the rail would not accomplish the purpose, as the engineman, after exploding the first caution-signal and proceeding under control for twelve or fifteen telegraph poles without exploding any others, might assume that the flagman had lifted the single torpedo and gone in, and so again get under full headway just as the stop-signal is exploded, when he would not be in much better position to stop within a safe distance than if the caution-signal had not been put down. If caution-signals be placed uniformly every fourth of a mile,

trains will be kept under control until the point is reached where it is necessary that they should stop and they would always be able to stop quickly. It should be remembered that an engine running light may be unable to stop as quickly as trains having greater braking power. An engine running light should never be allowed to follow a train carrying passengers closer than fifteen minutes.

*Question Number 480. When there is not a clear view for one-fourth of a mile in the rear of the train, what is required of the engineman before recalling his flagman?*

ANSWER. He must start the train and see that the markers are moving before calling in the flagman, and should keep the train moving at six miles an hour, if possible, until a place is reached where there is a clear view in rear of train for one-fourth of a mile before stopping to wait for the flagman.

*Question Number 481. In such case, should the flagman take up the single torpedo before returning to his train, or place another two rail-lengths from it?*

ANSWER. He should make it a caution-signal by placing another torpedo. To do otherwise would very likely leave too great space between the train and the caution-signal next back of the point of recall.

*Question Number 482. If necessary, should the flagman place caution-signals every fourth of a mile as he returns to his train?*

ANSWER. Yes, he should do so, and burn red fuses also.

*Question Number 483. When is the time of greatest risk?*

ANSWER. While going out to protect, or when returning to the train.

*Question Number 484. Under such circumstances, should the flagman see or hear a train approaching, what must he do?*

ANSWER. He must not return toward his train, even if recalled and his torpedoes are placed as required by the rules, but he must at once go toward the train which is approaching and make every effort to stop it.

*Question Number 485. By night, or at any time when the weather is foggy, rainy or snowy, must the flagman use fuses; what kind, and where?*

ANSWER. He must use red fuses always by night, and at other times when there is fog, rain or snow; not only while he is going out, but, if necessary, while he remains out, or when returning to his train. If recalled while standing where he has placed the single torpedo, he must burn a red fuse at that point and either take up the single torpedo or add another two rail-lengths from it.

*Question Number 486. When an engineman sees his train flagged, must he obtain a thorough explanation of the cause, stopping if necessary?*

ANSWER. Yes. He must stop and pick up the flagman should the latter desire to accompany the train.

*Question Number 487. May the engineman assume that, as he has, on previous trips, been flagged at the same place (it may be by the same person),*

*he need not stop to get an explanation; that such flagman will merely repeat the warning previously given him?*

ANSWER. He may assume nothing of the kind. The rule means just what it says. It may be that previous instructions were not to exceed a certain speed over a bridge, while the bridge may have become impassable since then.

*Question Number 488. By whom must the front of the train be protected, and in what manner?*

ANSWER. By the front brakeman, in the same manner as the rear. If the front brakeman is unable to go, the fireman must be sent in his place.

*Question Number 489. When one torpedo is exploded, does it always indicate that there is a train thus protected one-fourth of a mile beyond it, or simply that there is a train ahead?*

ANSWER. Neither. The explosion of one torpedo always means stop at once. It may have been placed by a watchman to protect an unsafe bridge, a washout, slide or a rock on the track, and he may not have had time to go back more than five or six telegraph poles, on account of having to protect in both directions and not knowing which important train to expect first. The explosion of one torpedo may be assumed to be about one-fourth of a mile from an obstruction only in cases where the cautionary torpedoes are exploded before reaching it.

*Question Number 490. When flagmen go back to protect their train about sunset, or are likely to be kept out after dark, what signals must be taken?*

ANSWER. Both day and night stop-signals.

*Question Number 491. How must flagmen be dressed during the winter weather?*

ANSWER. They should be dressed warmly, so that they can remain out as long as may be necessary.

*Question Number 492. If an emergency requires sending out a flagman who is not clothed warmly enough, what must the conductor or engineman do?*

ANSWER. He should relieve such person within a reasonable time.

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PROTECTING FIRST-CLASS TRAINS.

*Question Number 493. What is especially required for the protection of first-class trains, and where must the flagman take position and remain while the train is running?*

ANSWER. It is the flagman's especial duty to protect the rear of his train. He must take position on the rear car as indicated by the rules prescribing his special duties, and must have at hand the prescribed flagging equipment. When his train is in position to be overtaken he must at once protect it, without waiting to be told, or waiting for the whistle signal. He is allowed no discretion whatever in determining when his train shall be protected; if it stops or is delayed where it would be possible for it to be overtaken, he must *immediately* go back and protect it, as prescribed by Rule 99.

*Question Number 494. What is the conductor's duty with regard to seeing that his train is promptly protected, should it be in position to be overtaken?*

ANSWER. He must at once and personally ascertain whether the flagman has gone out to protect it.



*Question Number 495. May the flagman occupy the car next ahead of the rear car of his train?*

ANSWER. No. He must ride in the last car. If there should be a car attached to the rear which the flagman cannot ride in or get through quickly, he might not be able to go back at once, should his train slow down, especially if on a trestle or in a snow-shed or tunnel.

*Question Number 496. Should there be a private car attached to the rear of the train, must the flagman ride in such car, and if he were to be locked out at night, what must be done?*

ANSWER. He must ride in the car or be allowed to pass through it, but always take such position therein as not to disturb the occupants, unless unavoidable. Should the car be locked at night and, after explaining the necessity of the case, the occupants still decline to allow him to pass through it when necessary, such car should be placed elsewhere in the train.

*Question Number 497. What special precautions must the flagman of a first-class train take at regular stops?*

ANSWER. He must get off at the rear with stop-signals and go back about fifty feet every time the train stops at a regular schedule stopping place; if it is delayed five minutes or more (except that where suburban travel is heavy and trains are allowed to follow closer, it is not likely he would be allowed by rule to wait so long), he must go back and protect it as prescribed by Rule 99. When the train is ready to start, if delayed five minutes or more, the engine-

man must call in the flagman and, unless there is extreme danger of the train being overtaken on a heavy grade or during a severe storm, he must wait until the flagman returns to the train before leaving the station limits.

*Question Number 498. Should the train slow down or stop between stations, or make an unusual station stop, must the flagman at once protect it, and must the engineman call him in when the train is ready?*

ANSWER. Yes. Except that it is not necessary for the flagman to protect as prescribed by Rule 99 should the train make an unusual station stop and again be under headway in less than a minute.

*Question Number 499. May the flagman accept instructions from the conductor or others modifying or relaxing the positive directions here given in the matter of train protection?*

ANSWER. No. The flagman is entirely independent of his conductor, so far as the duty of protecting his train is concerned. Neglect in this respect has on more than one occasion resulted in loss of life. The question may appear irrelevant, except in isolated cases, since the conductor generally unites with the flagman in securing protection and keeps him posted as to extra stops and their probable duration.

*Question Number 500. What may the flagman expect should he fail in the prompt performance of his duty, even though an accident does not result?*

ANSWER. Dismissal from the service.

LECTURE. A short time ago the flagman of a first-class train did not immediately go back to protect the rear of his train, although that was his especial duty, and a number of persons were killed and injured. There were two passenger trains running only five or ten minutes apart. The engine of the forward train failed for lack of steam, and the conductor stopped at a station to exchange engines with a freight train. There was some delay in making the change, and, after waiting a few minutes, the conductor thought best to send his flagman back to warn the train which he must have known was following closely. The flagman then started back, but did not get far when the approaching train overtook him, and, as the night was stormy, the engineman did not observe the flagman until nearly upon him and could not stop in time to avoid striking the passenger train ahead. Had the flagman gone back at once, without waiting for instructions, or had the engineman whistled for him to go back, as he should have done, knowing that his train would quite likely be delayed, the following train could have been stopped in season.

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SPECIAL INSTRUCTIONS FOR SECTION AND BRIDGE FOREMEN.

*Question Number 501. When section or bridge foremen find it necessary to render the track unsafe by removing rails, ties, bridge-timbers, etc., what must first be done, and how?*

ANSWER. The foreman must first know that a reliable flagman has been stationed at least thirty telegraph poles in both directions from the obstruction, the grade and other conditions governing the

actual distance; also, the foreman must know that the flagman has a red flag, torpedoes and other stop-signals necessary to stop trains, and must instruct him to keep the red flag displayed in his hands, and that four telegraph poles beyond where he is to stand he must place one torpedo on the rail to attract attention in case the engineman does not observe his red flag. When the torpedo is exploded, he must replace it.

*Question Number 502. Must flagmen, in such cases, be sent in both directions on double track?*

ANSWER. Yes. Trains may be moved against the current of traffic without advising trackmen or bridge-men.

*Question Number 503. If flagmen are to be out for some time and there are many trains, must the foremen see that they are provided with additional torpedoes if they are likely to be needed?*

ANSWER. Yes.

*Question Number 504. Is thirty telegraph poles the proper distance to station flagmen from the point of obstruction in all cases?*

ANSWER. No; grade and weather must be considered; they must always be stationed far enough away from the obstruction to insure absolute protection. In extremely dangerous cases two flagmen may be sent in each direction, one to give notice where the train will be required to stop and the other to be stationed nearer the obstruction, to hold all trains.

*Question Number 505. If it be foggy or raining*

*should the foremen undertake to render the track unsafe, unless absolutely necessary?*

ANSWER. No.

*Question Number 506. If torpedoes are likely to fail or become impaired, by reason of rain or snow, what extra precautions must be taken?*

ANSWER. One must be placed on each rail, each directly opposite the other, to insure the explosion of at least one of them.

*Question Number 507. When torpedoes are damaged or exploded by hand-cars or push-cars, must they be replaced?*

ANSWER. Yes; the foreman should see that this is done at once.

*Question Number 508. When one gang passes another at work, what must be ascertained?*

ANSWER. The foreman must know whether such gang is protecting, and be governed accordingly.

CHART NO. 4. (Rule 1626.)

<i>Extra Gang's Flagman.</i>	<i>Section Gang.</i>	<i>Green and Red Flag.</i>	<i>Extra Gang.</i>
<b>F</b>	††††	<b>FF</b>	††††††††††

*Question Number 509. When sectionmen are working between an extra gang and the latter's flag or flagman, what precautions should be taken to prevent enginemen from being misled?*

ANSWER. A caution-flag must be kept displayed in the center of the track about one hundred feet

beyond the sectionmen, toward the extra gang, as shown in Chart No. 4, to warn all approaching trains that there is another gang at work beyond them. Foremen may point to it and themselves to indicate to the engineman that the flag was displayed to advise that they are not the gang which he may have received instructions to look out for.

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GENERAL QUESTIONS.

*Question Number 510. If the dispatcher informs a conductor that there are no trains following; that the dispatcher will protect for him and he need not do so, may the conductor understand that he is relieved from protecting at or between stations?*

ANSWER. No. The rules, unless abrogated by proper authority, must be obeyed by all.

*Question Number 511. May a branch train occupy the main line at a junction without protecting itself, even though it be informed by the operator or others that no main-line trains will arrive at such point for some hours?*

ANSWER. No. A rigid adherence to the rules in force is the only safe course.

*Question Number 512. In what way may a crew be relieved from protecting their train?*

ANSWER. By receiving a train order giving the train right over all following trains, or all trains; or an order reading, "All trains will wait at B until No. 15 arrives at C."

*Question Number 513. May a conductor pin a*

*notice on the train-register instructing following trains to look out for his train at a certain point and then understand that his train is thereby protected?*

ANSWER. No; a conductor may not assume the right to modify the rules of the road.

*Question Number 514. If a red flag is seen in the center of the track, or one torpedo is exploded, but no flagman can be found to explain the reason for stopping the train, what must be done?*

ANSWER. The engineman must give his whistle signal to send out a flagman and stop and call for signals. If the other flagman cannot be located or found within a reasonable time, the train may proceed; but it must follow a flagman.

*Question Number 515. What should an inexperienced flagman be instructed to especially look out for when thus sent ahead of the train?*

ANSWER. For broken rails, or, if there have been heavy rains, for damaged bridges or embankments, and in extremely dry weather for burned bridges or culverts. It would not be good judgment, however, to send an inexperienced man ahead in such cases.

*Question Number 516. Must the red flag be left as found, or a fresh torpedo be left on the rail in place of the one exploded by the train stopped by such signals?*

ANSWER. Yes; to prevent accident to following trains; also to assist in protecting the train thus warned by the signals. When an explanation can-

not be obtained and it is not known that such signals are only for the one train stopped by them they must be left as they were found.

*Question Number 517. How far must a train follow its flagman under such circumstances before resuming ordinary speed?*

ANSWER. Much would depend upon the condition of the weather and the general surroundings, but it should hardly be necessary to protect for more than a mile and a half.

LECTURE. In the case where no flagman is found when a train is stopped by a red flag or a torpedo, it is reasonable to assume that a watchman had placed the stop-signal to protect against some serious defect of the roadway and then went for help, or in the opposite direction to warn other trains. When flagmen return to their own trains, they must be particular to remove all stop-signals, except red fuses, as, under the rules, if this is not done a train must stop at once, and if no one is present to explain why the train was stopped there would be nothing left for it to do but to flag ahead for a mile or more. The red fusee will soon burn out and allow the train to proceed.

While all rules are important, doubtless the most important one is Rule 99. Failure to live up to the spirit of this rule has resulted in great loss of life and property. In calling special attention to the wording of this rule, it will be noted that no distinction is made as to the kind of trains, track, weather, or other conditions, however favorable or otherwise. It is true that because a car happens to



be standing within plain view, unprotected, there is absolutely no excuse for colliding with it; but, nevertheless, there is but one thing for men whose duty it is to protect their trains to understand, and that is that railroad companies permit nothing to be taken for granted, and care relatively little for the delays that might happen from the men seeming to be overzealous; trains must be protected, anyway. Men flagging for foremen must also comply strictly with their instructions and not leave their posts when on such duty for any purpose whatever, until relieved.

Fusees may be used to ignite fires to keep flagmen from suffering from cold, if no other means are at hand.

100. When the flagman goes back to protect the rear of his train, the conductor must, in the case of passenger trains, and the next brakeman or the conductor, in the case of other trains, take the flagman's place on the train.

*Question Number 518. When the flagman goes back to protect the rear of his train, who takes his place?*

ANSWER. In the case of passenger trains, the conductor. In the case of other trains, the next brakeman or the conductor, to assist in further protecting it, and to prevent the train from moving backward if on an incline.

*Question Number 519. May a train be left standing on a grade at a station without the rear being guarded by one of the crew, if it were possible for the train to run backward in case the brakes were released or the train struck while switching?*

**ANSWER.** No. The rear must be guarded at all times, if it is at all possible for it to move backward, or the train is in position to be overtaken.

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ADDITIONAL PRECAUTIONS.

*Question Number 520. May the engine be cut off from a train on a grade and the air-brake be depended upon to hold the train while the engine takes water, coal, or does switching?*

**ANSWER.** No; the hand brakes must always be applied.

101. If a train should part while in motion, trainmen must, if possible, prevent damage to the detached portions. The signals prescribed by Rules 12 (d) and 14 (f) must be given, and the front portion of the train kept in motion until the detached portion is stopped.

The front portion will then go back, to recover the detached portion, running with caution and following a flagman. The detached portion must not be moved or passed until the front portion comes back.

101 (A). Under circumstances where the front portion can be sidetracked, it should be done, and the engine return light for the detached portion.

*Question Number 521. When a train is discovered broken in two, what signals must be given and how answered?*

**ANSWER.** The engineman must sound three long blasts; and he must in the same manner answer a "train-parted" signal from the trainmen, if they first make the discovery and so signal him. Trainmen must give and answer the signal by swinging

hat or lantern in a circle at arm's length. Trainmen must not answer by giving the stop-signal, and the engineman must not answer trainmen by two short blasts.

*Question Number 522. How must the front portion of the train be moved in that case?*

ANSWER. The front portion must be kept in motion forward, until the detached portion is stopped.

*Question Number 523. Must the engineman also give the whistle signal to send out a flagman?*

ANSWER. He should do so if the circumstances require it.

*Question Number 524. Must the rear portion be stopped at once, or may it be allowed to drift along?*

ANSWER. It must be stopped at once.

*Question Number 525. When the front portion is stopped, what should the men on that part do?*

ANSWER. There may be a middle portion with no one attending it, in which case it would be likely to follow as soon as the air bleeds off, if on a descending grade; for this reason the brakeman or fireman should go back to the rear of the front portion and close the angle-cock as quickly as possible, to allow the engineman to release the brake and get out of the way, if necessary. If the train parts on a heavy ascending grade, the hand-brakes should be applied before the angle-cock is closed, to prevent the train from running backward when the air-brake is released.

*Question Number 526. Before giving the engine-*

*man the signal to back, to recover the detached portion, what kind of inspection must be made?*

ANSWER. The cars in the front portion must be carefully examined, particularly the rear car, to ascertain that the brake is working through the train and that the draft-rigging is not pulled out of the rear car and obstructing the track.

*Question Number 527. May the engineman return for the detached portion without having a flagman precede him?*

ANSWER. No. And the flagman must be allowed to keep far enough in advance to enable the front portion to be stopped in time to prevent an accident should the detached portion be found in a cut or on an obscured curve, or should the brakes release and allow the rear portion to move forward.

*Question Number 528. When practicable, must the front portion be taken to a siding and the engine return light for the detached portion, especially during thick weather, at night, or when the view is obstructed by many curves, or the grade is heavy?*

ANSWER. Yes. There is less risk when this method is followed.

*Question Number 529. If, when the front portion is taken to a siding, it be found that the train is close upon the time of an opposing superior train over which it has not been given right, must a flagman be left at such siding or station to hold the superior train until the engine of the parted train can return with the detached cars, or may the operator be depended upon to give protection by directing*

*him to display his train-order signal at stop and notify the superior train?*

ANSWER. A flagman must be left. There is no objection to the operator displaying the order-signal at "stop" to assist in giving protection, but he must not be entirely depended upon. The fireman or brakeman of the broken train must be left at the station to hold the superior train until the detached portion returns. Ordinarily, the flagman will be required to go beyond the station to properly protect the opposing train and to stop it clear of the switch to be used by the returning train.

*Question Number 530. It may be that a number of draw-heads have been broken or pulled out and all of the trainmen would be needed to chain up cars and clear the main track; what should then be done?*

ANSWER. If at a telegraph office, application should be made for a train order giving right over all trains for a sufficient time to clear the track, as trains cannot proceed until the track is cleared.

*Question Number 531. Should a train come up behind a car upon which markers are displayed, may it be moved or run around until the front portion of the train which has evidently parted from it is known to have returned?*

ANSWER. The part of a train that has broken in two must not be moved or passed until the front portion of such train returns for it.

*Question Number 532. Why not?*

ANSWER. Because the front portion can return for its rear portion, disregarding all following trains

and without train orders to do so, provided a flagman precedes it.

*Question Number 533. Should the rear portion be left at or near a telegraph office and the front portion be taken to the next telegraph office ahead, is there any way to ascertain whether or not there is a middle portion between such stations?*

ANSWER. If it is known how many cars there were in the train before it parted, all the cars can be accounted for. Or, if the train-book is at hand, the conductor may determine it by getting the number of the last car in the front portion and the first car of the rear part.

102. When cars are pushed by an engine (except when shifting and making up trains in yards) a flagman must take a conspicuous position on the front of the leading car and signal the engineman in case of need.

*Question Number 534. When cars are pushed by an engine, except when switching and making up trains in yards, what precautions must be taken to prevent striking persons or cars?*

ANSWER. A flagman must take a conspicuous position on the front of the leading car and signal the engineman in case of need.

*Question Number 535. If cars are backed or cut loose and allowed to run over a street, highway or private crossing, what precautions should be taken?*

ANSWER. There must be a flagman on the front of the leading car, or walking ahead of it, unless there be a flagman regularly stationed at such crossing and he is on duty.

*Question Number 536. May cars be left within the boundaries of a street or public highway?*

ANSWER. They should not, and many cities forbid it. Cars near a crossing also obstruct the view.

*Question Number 537. What clearance should be allowed between cars left on sidetracks and tracks adjoining?*

ANSWER. Sufficient clearance should be allowed to prevent injury to trainmen who sometimes find it necessary to get on or off the sides of cars in their train.

*Question Number 538. If cars are left on a grade where they may start by gravity, what precautions must be taken?*

ANSWER. Hand-brakes must invariably be set, and if necessary the wheels must also be securely blocked.

103. Messages or orders respecting the movement of trains or the condition of track or bridges must be in writing.

*Question Number 539. If verbal instructions are given or ordinary messages sent to proceed against other trains, that everything will be held until the train thus notified arrives, or that no other train can leave until a certain point is reached; or to occupy the main track without protecting, as there are no trains near; or not to stop to check a register, or similar directions, should they be accepted and such information acted on?*

ANSWER. It makes no difference whether verbal or message instructions attempt to confer right

upon a train. Right cannot be conferred verbally or by message; there must be a train order, or protection is necessary. Train-registers must not be disregarded without a train order, but they must be checked as required by the rules. Messages may contain errors and may fail to say what the dispatcher or other writer intended; this is why train orders are repeated, to insure their being correct. If there should be a wreck or other emergency, messages concerning the same or directing the work must be respected, but cannot be understood as relieving any one from properly protecting his train. Any instructions, verbal or by message, restricting a train's movements should, however, be respected. See Rule 106.

*Question Number 540. May enginemen accept from their conductors verbal information as to whether overdue trains have arrived or left at points where there are train-registers?*

ANSWER. No, not when Form 52 is used.

103 (A). Special instructions will be posted in bulletin-books provided for that purpose at designated stations. Conductors and enginemen must examine all bulletins before starting on each trip and acknowledge notice by signing their names in the place provided therefor.

*Question Number 541. What is required of all concerned with regard to examining bulletin-books, and what record must be made after having done so? (See Form 55, in Appendix.)*

ANSWER. Conductors and enginemen must examine the bulletins before starting on each trip, and



acknowledge notice by signing their names in the place provided therefor. Such other persons as the rules prescribe must also examine bulletins, and if trainmen or firemen they should do so before starting on their trip.

*Question Number 542. If the conductor notices a late bulletin which also concerns enginemen, but which his engineman has not acknowledged, must he call his attention to it?*

ANSWER. Yes, but this does not relieve the engineman from responsibility for failure to read and acknowledge such bulletin.

*Question Number 543. Out on the road there are sometimes instructions concerning conductors and enginemen pinned to registers at points where enginemen are not required to go to the office. What must the conductor do in such cases?*

ANSWER. He must inform his engineman of such instructions, making him a copy if the circumstances warrant it.

NOTE.—Some companies supply their conductors with copies of bulletins and require them to paste them in a book and keep the book where it may be readily referred to. This enables conductors of work trains, or others who may not leave initial stations daily, to keep posted.

104. Switches must be left in proper position after having been used. Conductors are responsible for the position of the switches used by them and their trainmen, except where switch-tenders are stationed.

A switch must not be left open for a following train unless in charge of a trainman of such train.

*Question Number 544. How must switches be left after having been used?*

ANSWER. In proper or normal position. Those in main track, locked for the main track; those in passing sidings, locked for such sidings, except that, of course, the switches connecting the passing sidings with the main track must be locked for the main track.

*Question Number 545. How must derail switches be left?*

ANSWER. Locked for the track in which they are placed, except when there are cars on such track, then locked to derail.

*Question Number 546. It may be claimed that this plan is burdensome; that the crew who are leaving cars may have to walk back a considerable distance to lock for the derail; can this be obviated?*

ANSWER. The crew, knowing that they must leave cars on such track, should lock the derail switch for the derail as they pass it.

*Question Number 547. Who are responsible for the position of the switches?*

ANSWER. Conductors are responsible for the switches used by them and their trainmen, except where switch-tenders are stationed.

*Question Number 548. If the crew of the superior train were to occupy the main track and turn the switch for the siding, who is responsible for again locking the switch for the main track after the inferior train has passed?*

ANSWER. The conductor of the superior train.

*Question Number 549. If the train which pulls into the siding were to see no one tending its*

*switch, may it proceed without locking it for the main track?*

ANSWER. The crew of the train taking the siding must lock the switch for the main track and report the facts.

*Question Number 550. Is it good practice for trains to hold the main track when, by rule, they should take the siding; or for trains to take the siding when they should occupy the main track?*

ANSWER. Trains must, as far as practicable, be governed strictly by the rules in such matters. They should take siding if so required to do, or hold the main track if they are superior trains. Dispatchers should not interfere, except when necessary in changing meeting points; when time can be saved, or the inferior train is the more important. Also, it may be unavoidable or desirable at times to depart from the rule when there are many cars on a siding and the inferior train is heavily loaded but the superior train is not, or when to require the inferior train to use the siding would necessitate their doubling.

*Question Number 551. Is it proper for a train to "head in" on a siding and stop at some distance from the telegraph office and wait indefinitely for an opposing train which it is directed to meet, or which is superior to it, intending to back out and take the main track after such train is met?*

ANSWER. If the siding is clear the train should pull up to the station. Either it may find an order there to proceed, or, generally, station work can be done while waiting, and thus save time and avoid an extra stop.

*Question Number 552. May a train occupy the main track at or near a switch without turning the switch for the opposing train that is to take the siding?*

ANSWER. The train waiting on the main track must invariably turn the switch (if near it) so that the opposing train shall take the siding, since the air-brake of the approaching train might fail or a storm obscure the view ahead.

LECTURE. The white signal light on the front of the engine of an extra train at a junction has been known to cause an accident because the switch was not set for the track to be used by the opposing train. The switch light failed, and the engine's white light was mistaken for the switch light and was thought to indicate that the switch was set for the track which the approaching train was to use.

*Question Number 553. Under what circumstances may a switch be left open for a following train?*

ANSWER. It may be left open only when a trainman of the following train is at the switch to take charge of it. Otherwise, should the following train meet with an accident, or, after arrival, be unable to follow the other train and neglect to lock the switch for the main track, or decide to back out of the siding, there might be a collision or the train which backed out be derailed.

*Question Number 554. May an operator, agent, section- or bridge-foreman tend switches for trainmen or enginemen?*

ANSWER. Not unless necessary to prevent acci-

dent, or it is made a part of an operator's duty at the end of double track, etc.

*Question Number 555. May brakemen or firemen consider a switch turned for their train, and so indicate to their enginemen, when the target or light is seen to change, or must the train wait until a signal is received from the employe at the switch?*

ANSWER. The train must wait for a signal from the man at the switch. Although the target or light may be seen to change, the points may have failed to close up properly, or the man at the switch may have discovered an obstruction between the points.

*Question Number 556. Is simply turning a switch all that is expected of the person who tends it?*

ANSWER. No; he must also observe the points, to see that they properly close up. There may be snow or other obstruction between them, or they may have been damaged, or the rods may have worked loose.

*Question Number 557. After locking a switch, what precautions should be taken to make sure that it is locked?*

ANSWER. If separate locks are provided, the switchman should so grasp the lock as to insure that the switch is left locked.

*Question Number 558. How often must road masters make a personal inspection of all switches and other appliances affecting the safety of trains on their districts?*

ANSWER. Monthly.

*Question Number 559. How often must section-foremen examine switches, frogs, etc., on their sections?*

ANSWER. Daily.

*Question Number 560. Must main-track switches leading to gravel-pits, etc., be spiked when not in use—during the winter season, for instance?*

ANSWER. Yes, especially if “facing-point” switches.

*Question Number 561. If necessary to spike a defective switch which is in daily use, must the superintendent be notified?*

ANSWER. He should be promptly advised of the fact, and again notified when the switch has been repaired. The section-foreman should select material that can be taken from some unimportant switch to repair a more important one, should he not have extra material on hand.

104 (A). At meeting and passing points, or when trains are standing at the end of double track for expected trains, the employe tending the switch must, after locking it for the track to be used by the expected train, take position on the opposite side of track from the switch-stand and remain there until the entire train or trains have passed, and carefully observe the signals displayed by such trains.

Employes must get on or off a train or engine on the side opposite to the switch-stand (except when running ahead to open the switch, or catching a train after closing the switch).

*Question Number 562. After locking a switch for his own or an expected train, or when standing at a switch at any time awaiting trains, where must*

*the employe tending the switch take position and remain?*

ANSWER. He must stand on the side of the track about opposite to the switch-stand, not more than thirty feet from it, and remain there until the entire train, or trains, have passed, and carefully observe the signals displayed at the front and rear of such trains.

*Question Number 563. May yardmen be excused from complying with this rule?*

ANSWER. Yes; but, when practicable, they should observe it while at main-track switches.

*Question Number 564. Under what circumstances may an employe get off or on an engine or train on the same side that the switch-stand is on?*

ANSWER. When necessary to run ahead to open a switch, or to catch his train after closing it.

*Question Number 565. Must enginemen regulate speed so that the person opening a switch can take position on the opposite side before the train reaches him?*

ANSWER. Yes.

*Question Number 566. May an employe, after closing a switch, get on his train from the switch-stand side of the track?*

ANSWER. No, except when necessary to catch his train.

*Question Number 567. May the man at the rear get off the rear steps of caboose on the switch-stand side of the track and run ahead, to be ready to close the switch as soon as his train clears it?*

**ANSWER.** No: men have been known in such cases to run ahead and turn the switch before their caboose was clear of the points.

**LECTURE.** The object aimed at in this rule is to keep train employes from being at a switch-stand while their train, or any other, is about to use the switch, as they often become confused, and, although the switch may be properly set, are liable to throw it and run other trains into their own, or to turn the switch while their train is passing over it. Switch-tenders also are apt to sit down and drop asleep, and when they hear the whistle of a train their first thought is of the switch, and not infrequently, although it may be properly set, they again throw it.

104 (B). When a train backs in on a siding to be met or passed by another train, the engineman, when engine is in to clear, must see that the switch is set for the main track. Enginemen must know that switches are properly set before they pull in or out of sidings.

*Question Number 568. When a train backs in on a siding to be met or passed by another train, what special precaution must be taken by the engineman?*

**ANSWER.** When his engine is clear of the main track he must observe the switch, to see if it has been set for the main track, or the track to be used by the expected train.

*Question Number 569. May the headlight be concealed until this is ascertained?*

**ANSWER.** No.



*Question Number 570. May the provisions of this rule be construed to relieve the conductor from responsibility for knowing the position of switches used by his train?*

ANSWER. No; both the conductor and the engineman are responsible. It is an extra safeguard to which the attention of enginemen is especially called.

*Question Number 571. Before enginemen pull in or out of sidings or pass derailing switches, must they know that the switches are properly set for their train?*

ANSWER. Yes, and they must wait until they receive a hand or lamp signal from the employe tending the switch before passing it if changed for their train.

105. Both conductors and enginemen are responsible for the safety of their trains and, under conditions not provided for by the rules, must take every precaution for their protection.

*Question Number 572. Who are responsible for the safety of trains, and, if necessary, must precautions not prescribed by the rules be taken?*

ANSWER. Both conductors and enginemen are responsible, and under conditions not provided for by the rules must take every precaution necessary to secure safety, keeping in mind that the rules prescribe only the least that may be done.

*Question Number 573. It sometimes happens that a conductor who has not had long experience is sent out with an engineman who has seen many years of service, or the reverse may be true; under*

*such circumstances, what would good judgment on the part of the older and more experienced man dictate?*

ANSWER. Realizing the advantages of his own experience, he should willingly advise and assist the employe of lesser knowledge, cordially co-operating with him to secure safety and the proper handling of the train.

106. In all cases of doubt or uncertainty the safe course must be taken and no risks run.

*Question Number 574. In all cases of doubt or uncertainty, what must be done?*

ANSWER. The safe course must be taken and no risks run.

*Question Number 575. Should this rule govern the action of a conductor and engineman were they to receive a train order not in proper form, the wording of which raised a doubt in their minds as to whether an opposing train would understand that the order made it inferior to their own train?*

ANSWER. Yes; a doubtful order, like a doubtful signal, is an untrustworthy guide.

## **MOVEMENT BY TRAIN ORDERS.**

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### **PREPARATION OF ORDERS.**

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201. For movements not provided for by Time-table, train orders will be issued by authority and over the signature of the train master or superintendent. They must contain neither information nor instructions not essential to such movements.

They must be brief and clear; in the prescribed forms when applicable; and without erasure, alteration or interlineation.

LECTURE. Perhaps the formation of habit is more essential in railroad operation than in any other business. A habit once formed, if a safe one, will always be the governing impulse, and goes far toward insuring safety and uniformity. If any one doubts that men are involuntarily governed by habit, let such person try to change; for instance, to wind his watch in the morning instead of at night; to change his pocket knife from the right to the left pocket, etc. If enginemen form the habit of always whistling for flagmen to go back when they stop or are delayed under circumstances in which they may be overtaken, they will not fail to do so; and if flagmen are in the habit of going back at once to protect their train when likely to be

overtaken, they will not forget that duty. If trains going in one direction are always required to hold the main track, and those going in the other direction to take the siding, confusion and perhaps accident will be avoided. If men are always accustomed to throw switches for opposing inferior trains, or to observe signals displayed by other trains, and to note markers and the position of switches and other fixed signals, they will be apt to do so mechanically, without fail, and will not be easily deceived by the position or absence of the signal. If trainmen and enginemen report for orders to run to a certain station with their minds fixed principally upon that objective point, to give them orders to run extra for only half the distance is like setting a trap for them and may in time result in collision from the men overlooking their short running orders, and if such orders are depended upon to prevent collision with opposing extra trains an accident will almost certainly result. It is wrong for trains to take sidings if they should keep the main track, as others may get into the habit of expecting them to do so, and if perhaps during a storm they then hold the main track under their superiority there may be loss of life or damage to property. It is wrong for dispatchers to direct superior trains to take the siding unless the inferior train they are to meet happens at that particular time to be especially important, or in rare cases when much time can be saved, or a change in train-order meeting points makes it necessary. The switches can often be set beforehand in such manner as to avoid delay and allow trains to use

the tracks they ought to take. It is sometimes unsafe for dispatchers to run freight trains as sections of first-class trains without advising all concerned, as trainmen and enginemen are in the habit of seeing only coaches running as first-class trains, and may be misled by the unusual circumstance, or possibly may take it for a freight which they have been waiting for. It would not be good practice, where sections are seldom run, to instruct a branch train to display signals for a following section without in some manner advising the other branch trains. It is improper for dispatchers to issue train orders contrary to the prescribed forms, when the prescribed forms can be made to apply (and after being disciplined for failure to use them it is generally found that they can be used), as trainmen and enginemen who have been fully instructed as to their rights under the prescribed forms perfectly understand such orders without special mental exertion, having become accustomed to expect such forms of orders. Orders should therefore always be issued in correct form and simply worded. A train master can employ a part of his time profitably in inculcating and impressing on his men the necessity for forming safe habits. Possibly his earnestness in this may be brought home to them more forcibly by disciplining those who fail to always and promptly perform their duty.

*Question Number 576. What may be called scientific train-dispatching?*

**ANSWER.** Issuing brief orders and wording them so simply and clearly that a misunderstanding cannot possibly arise.

*Question Number 577. By whose authority and over whose initials must train orders be issued, and may they contain information not essential?*

ANSWER. By authority and over the signature (initials) of the superintendent. They must contain no information or instructions not essential to such movements.

*Question Number 578. What are their essential requisites?*

ANSWER. They should be brief, clear, in the prescribed forms when applicable, and without erasure, alteration or interlineation.

*Question Number 579. What is meant by erasure, alteration or interlineation?*

ANSWER. Scratching or rubbing out is erasure; changing a word or figure is alteration; inserting a word or figure between lines is interlineation. For illustration, see Chart No. 5.

*Question Number 580. Should an order which is illegible, dim, scratched or in any way altered be accepted?*

ANSWER. Such orders do not have to be accepted. The operator may be requested to make a clear and legible copy. It would not, however, be proper to refuse to accept or fail to respect an order in imperfect form until another copy is obtained, nor should any kind of an order limiting or taking away the superiority of a train be declined. Faulty orders, if used, may give rise to argument, in case of accident, as to who is responsible for their faultiness.

202. Each train order must be given in the same words to all persons or trains addressed.

*Question Number 581. May the wording of an order be changed, giving a different form to each train even though the meaning be the same, or may parts which do not specially interest the train addressed be omitted?*

ANSWER. No; each train must receive orders for the same movement in the same words.


*Question Number 582. Should the dispatcher address an order to a first-class train and to several freight trains containing a number of movements between freight trains, but only a few words that apply to the first-class train—for instance, an order to run fifteen minutes late A to B, thus causing delay to the first-class train because of time taken to read instructions that do not concern its movements?*

ANSWER. The instructions to run late should be given in a separate order. This is a case where Rule 201 applies forcibly.

203. Train orders will be numbered consecutively each day, beginning with No. 1 at midnight.

*Question Number 583. How must train orders be numbered?*

ANSWER. Consecutively each day, beginning with No. 1 at midnight, except that when a dispatcher handles two or more districts, or when the same trains are likely to run on both, he may, to avoid duplication, begin with 1, 100, 200, and so on.



*Question Number 584. May orders be numbered, say, 201½?*

ANSWER. The only time that there can be an excuse for such numbers would be when the dispatcher discovers duplicates and can arrange in no other way. It creates confusion and uneasiness, and is not to be commended.

*Question Number 585. Is there objection to a higher series of numbers to be used for taking receipts for new time-tables or for "slow" orders, giving them higher numbers than are likely to be reached for other kinds of orders during twenty-four hours, and may such orders be entered in a separate book?*

ANSWER. There is no objection to the practice, and it is recommended. Such orders need not be annulled and reissued daily, but may be delivered under their original date, provided the date when "complete" is given is also entered in that column. There is objection to numbering orders "100A," etc.

204. Train-orders must be addressed to those who are to execute them, naming the place at which each is to receive his copy. Those for a train must be addressed to the conductor and engineman, and also to any one who acts as its pilot. A copy for each person addressed must be supplied by the operator.

*Question Number 586. To whom must train orders be addressed?*

ANSWER. To those who are to execute them, naming the place at which each is to receive his copy.



*Question Number 587. How must train orders be addressed?*

ANSWER. To the conductor and engineman, and also to any one who acts as pilot.

*Question Number 588. How many copies must the operator supply?*

ANSWER. One for each person addressed.

*Question Number 589. Must the pilot also acknowledge receipt of orders by signing his name as pilot, and must such signature be transmitted to the dispatcher?*

ANSWER. The rules provide that orders shall be addressed to the pilot the same as to the engineman, and the conductor is held responsible for the delivery to these persons; but the pilot is not required to sign his name to the orders unless he is also the conductor of the train. It is incumbent upon the pilot to assist in checking registers; to prevent the train from getting on the time of a superior train without authority; to see that all train orders delivered to the train are properly executed, and to advise as to grades, unsafe places in road, if any, and the location of the stations and fixed signals.

205. Each train order must be written in full in a book provided for the purpose at the office of the superintendent, and with it recorded the names of those who have signed for the order; the time and the signals which show when and from what offices the order was repeated; the responses transmitted; and the train dispatcher's initials. These records must be made at once, and never from memory or memoranda.

*Question Number 590. What record must be made of train orders at the office of the superintendent?*

ANSWER. For answer, see Rule 205.

*Question Number 591. Should dispatchers have any particular kind of a book in which to make the record?*

ANSWER. Any ordinary blank-book will be found more satisfactory than a printed form.

*Question Number 592. How should orders be entered in this book?*

ANSWER. The following method has been found to be satisfactory:

Order No 35.

31 C & E No 2 E. (X-d or Rptd 9 30 p m)  
Jones No 2 Com 9 55 p m.

31 C & E No 16 D. (X-d or Rptd 9 32 p m)  
Smith No 16 Com 9 35 p m.

19 C & E No 15 B. Com 9 34 p m.

No 2 and No 16 will meet No 15 at C.

*Question Number 593. When an order has been fulfilled, should the dispatcher check it off by use of a blue pencil or other means?*

ANSWER. Yes. A rubber stamp reading, "Fulfilled, J. B. F.," is used by some, and is recommended as convenient.

*Question Number 594. When one dispatcher re-*

*leaves another, must a full transfer be made, and must it be in writing?*

ANSWER. A common practice is for the dispatcher going off duty to write out a synopsis of all outstanding orders and have the relieving dispatcher sign it.

*Question Number 595. . Is this a good plan, or is it necessary?*

ANSWER. It is not.

LECTURE. Errors have been found in such a synopsis which would have resulted in collision if the original orders had not also been carefully read by the relieving dispatcher. Its preparation requires dispatchers to devote considerable of their time that might otherwise be given to the train service. If dispatchers will carefully check off their orders as soon as they expire, and then make a full verbal explanation to the relieving dispatcher of all outstanding orders, and have him repeat the explanation as he understands it, there should be no need of a written synopsis; but should there be any doubt about the information thus received, the few orders in effect at the time can be quickly referred to, and there is less chance of an error than there would be were they to be transcribed. Should it be thought necessary to use the synopsis, the dispatcher who is to be relieved should write only the order numbers and allow the relieving dispatcher to fill in the movements as he finds them in the original orders. In an extensive practice, where from sixty to ninety trains were moved daily on one hundred

and fifty miles of single track by one set of dispatchers, it has never been found necessary to use a synopsis.

206. Regular trains will be designated in train orders by their numbers, as "No 10," or "2d No 10," adding engine numbers when necessary to further identify trains; extra trains by engine numbers, as "Extra 798," with the direction when necessary, as "East" or "West." Other numbers and the time will be stated in figures only.

**NOTE.**—Orders may be typewritten. They must be punctuated only as indicated by the examples. Only the copy retained by the operator may be underscored. Figures must stand out boldly and not be run together or surrounded by circles.

*Question Number 596. How must regular trains be designated in train orders, and when should engine numbers be added?*

**ANSWER.** Regular trains must be designated by their train numbers. Engine numbers should be added if necessary to identify trains in that manner.

*Question Number 597. How must extra trains be designated?*

**ANSWER.** By their engine numbers.

*Question Number 598. Must the direction of extra trains be stated?*

**ANSWER.** The rules do not require it in all cases, but as it has to be done part of the time it would be better to form the habit of adding it at all times. The direction in which an extra train is moving is essential in order to properly identify the train.

*Question Number 599. How must other numbers and the time be stated?*

ANSWER. By figures only. Figures are not to be spelled out in duplicate.

*Question Number 600. Is there any objection to typewritten orders?*

ANSWER. There is no record of accident chargeable to such orders. They are very plain; but it is recommended that larger type be used than is ordinarily furnished with typewriters.

*Question Number 601. How should orders be punctuated?*

ANSWER. Operators must conform to the printed examples in this respect.

*Question Number 602. The rules require operators to observe whether others repeat correctly the orders received; what means may they use in doing so?*

ANSWER. Each operator may check the copy which he is to retain.

*Question Number 603. What care should operators use in regard to figures?*

ANSWER. They should avoid running them together in such manner as to make it difficult to decipher them.

NOTE.—Reference may be made to Chart No. 5 for illustration of such faults, as well as other imperfections which have been known to result in accident.

CHART NO. 5.

12 06 p m	2d No 15	Address to
1 20 p m	not	C & E Ea 455 West.
<hr/>	2nd 15	not
12 05 p m	<hr/>	X 455.
not	10 p m	<hr/>
12:5 p m	not	Eastbound trains.
or	1000 p m	not
120 5 p m	Except in	All trains East.
or	schedules,	<hr/>
(12:05) p m	then :	2d No 16 will meet Extra 445 West at C instead of D.
<hr/>	10 00 p m	not
Write	1 00 a m	X 445 will meet 2/16 at C instead of D.
Plainly	2 35 a m	
	4 00 a m	

LECTURE. Chart No. 5 represents correct and incorrect examples; some of the latter have caused misunderstanding and accident. Dispatchers should not end a time order on the figure 6, as it is similar to the letter "p" in Morse characters, and might easily be written 1 20 p m by an operator, and, unless the dispatcher checks closely while the operator is repeating such order the error will not be detected. "12 05 p m" is correct; "12:5 p m" is not. "120 5pm" is misleading, the figure "5" being too close to the "p m," and may be overlooked. A figure must not be surrounded with circles or enclosed in brackets. If "1 05 p m" were written within brackets there would be a chance of understanding it to mean "11 05 p m." Do not run figures together or allow an opening at the top of

a cipher, thus causing it to resemble a figure 6; it might thus change "4 40 p m" to "4 46 p m," or if carelessly made the figures "4 40 p m" may be made to look like "6 40 p m" or "6 46 p m." Often "7 35 p m" is so written that it may be mistaken for "9 55 p m." "10 p m" is written with but two figures, not "10 00 p m." "2d No 15" is correct; "2nd 15," or "2/15," is not. Orders must always be addressed to the "C & E" of a train when applicable. The other examples explain themselves.

NOTE.—The examiner should use local references in explaining this subject, and thus increase the interest and make a more lasting impression. He may also have at hand a number of faulty orders, if such were actually issued.

## TRANSMISSION OF ORDERS.

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207. To transmit a train order, the signal "31" or the signal "19" must be given to each office addressed, the number of copies being stated, if more or less than three—thus, "31 copy 5," or "19 copy 2."

*Question Number 604. What signals must be given to indicate train orders and to tell the operator what form to use?*

ANSWER. The signal "31" or "19," with the number of copies required, if more or less than three.

*Question Number 605. Where the semaphore form of train-order signal is used, should dispatchers indicate the direction in which the train is moving when he gives the signal "31" or "19"?*

ANSWER. Yes; thus: "31 copy 5 East," so that the operator may avoid displaying both signals and stopping trains unnecessarily. If the direction is not given, it may be understood that the order is for trains in both directions.

LECTURE. Some companies have changed the wording of Rule 221 to read, "After an operator has received the address of an order he must immediately display the 'stop signal' and then reply,



'Stop displayed'"; and such companies do not require the operator to reply "Stop displayed" until he starts to repeat the order to the dispatcher. This plan is recommended.

208. A train order to be sent to two or more offices must be transmitted simultaneously to as many of them as practicable. The several addresses must be in the order of superiority of trains, each office taking its proper address. When not sent simultaneously to all, the order must be sent first to the superior train.

*Question Number 606. How must train orders for two or more offices be sent, and in what order?*

ANSWER. Simultaneously, to as many as is practicable; the several addresses must be in the order of superiority of trains.

*Question Number 607. When not sent simultaneously to all, which train must be first addressed?*

ANSWER. The superior train; and the order must be acknowledged before inferior trains may act on it.

209. Operators receiving train orders must write them in manifold during transmission, and if they cannot at one writing make the requisite number of copies, must trace others from one of the copies first made.

*Question Number 608. If operators cannot at one writing make the requisite number of copies of an order, how may they procure additional copies?*

ANSWER. They must trace others from one of the copies first made.

*Question Number 609. Are they required to re-*

*peat the new copies to the dispatcher, to insure their being correct?*

ANSWER. There is no objection to their doing so, although the rules do not require it.

210. When a "31" train order has been transmitted, operators must (unless otherwise directed) repeat it at once from the manifold copy in the succession in which the several offices have been addressed, and then write the time of repetition on the order. Each operator receiving the order should observe whether the others repeat correctly..

Those to whom the order is addressed, except enginemen, must then sign it, and the operator will send their signatures, preceded by the number of the order, to the train dispatcher. The response "complete," and the time, with the initials of the superintendent, will then be given by the train dispatcher. Each operator receiving this response will then write on each copy the word "complete," the time, and his last name in full, and then deliver a copy to each person addressed, except enginemen. The copy for each engineman must be delivered to him personally by the conductor. The engineman must acknowledge his receipt of the order by endorsing his name on the conductor's copy.

*Question Number 610. Describe how "31" orders are transmitted, repeated, by whom signed and how delivered?*

ANSWER. In the manner prescribed by Rule 210. [Here give the substance of the rule.]

*Question Number 611. When may an operator send the conductor's signature to the dispatcher?*

ANSWER. When the conductor has actually signed, and not before.

*Question Number 612. What danger is there in sending the signature before it has actually been made by the conductor?*

ANSWER. It is not only a violation of the rule, but unsafe, as the operator may overlook delivering all orders to the conductor, or while the train is held at his station it may be necessary to place it on the siding before the conductor has acknowledged the order, and if the operator sign for the conductor the train may not be clear of the main track and a collision result before the conductor is aware that precedence has been taken away from his train.

*Question Number 613. May operators allow any one to sign the conductor's name—the brakeman, for instance?*

ANSWER. No; and if an engine is running without a conductor the engineman will sign the orders, as he is then also acting as conductor.

*Question Number 614. To whom must operators personally deliver "31" orders?*

ANSWER. To conductors.

*Question Number 615. Must the operator read the order aloud to the conductor, or the conductor read it to the operator?*

ANSWER. No.

*Question Number 616. If the engineman is at hand, may the operator deliver him his copy of the "31" order, or may an engineman accept a "31" order from an operator if his train has a conductor?*

ANSWER. No.

*Question Number 617. To whom must the conductor deliver the "31" order?*

ANSWER. He must personally deliver a copy to each of his enginemen; and to his pilot, if there be one.

*Question Number 618. Must the conductor read the order to his engineman or to the pilot, or the engineman or pilot to the conductor?*

ANSWER. No.

LECTURE. It is not thought best to require any one to read an order to another interested person. An employe reading an order to another may misread a word or overlook one, and the person who hears the order read may thus get an entirely wrong idea of its meaning, besides the bad habit of depending too much upon another's reading. If each man reads the order for himself he is not thus forestalled in his understanding of it, and so perhaps get an incorrect impression fixed in his mind, which, even though he may again read the order carefully, is sure to have its influence. Again, there may be two stations of similar names, or the order may not be legible, and so be misread and misunderstood. Accidents have resulted from the conductor reading orders to his crew. In one case the order read to "meet 1st and 2d No 15 at C." The conductor handed it to his engineman and brakemen with the remark, "We meet 1st No 15 at C." After the accident, all discovered that the order also required that the second section should be met at C. Had the order simply been delivered as required by these instructions, the collision would have been

averted. The "2d No 15" was not very distinct—until after the trains had collided; it could be read quite plainly then. Again, on a Western road a conductor read to his engineman an order to wait at a station "until 2 15 p m." After the accident, it was very clear that it read "2 25 p m." The engineman was misled by the conductor's error, and, notwithstanding he himself read it also, he involuntarily remembered only the way that it had been read aloud to him by the conductor.

*Question Number 619. When a conductor delivers orders to his engineman, what must be done?*

ANSWER. The engineman will compare the order numbers and then sign his name on the copies retained by the conductor.

*Question Number 620. May an engineman accept "31" or "19" orders from brakemen?*

ANSWER. No. To do so would be unsafe and a failure to comply with the rules. Conductors must know that each of his enginemen have copies of all orders entrusted to his care, before giving the signal to start. The brakemen may fail to reach the enginemen by the time the order-signal is restored to "proceed" and, upon receipt of a proceed signal from the conductor, the engineman may infer that there were no orders for his train, and so proceed.

*Question Number 621. Under what circumstances must "31" orders be signed by enginemen and their signatures sent to the dispatcher?*

ANSWER. When they have no conductor, and when orders are sent to a train at a blind siding in care of some other person. Some companies also

require enginemen to personally acknowledge receipt of new time-tables. It is also proper for enginemen to endorse their names on orders whenever their engines have passed an order-signal at "proceed" and afterward the operator receives a restricting order for their train and requests them to endorse their name on the order as an acknowledgment that they have been notified. Afterward, the conductor must deliver to the engineman the completed order.

*Question Number 622. Should operators observe whether other operators repeat orders correctly, and if such repetition does not agree with their own copies, must attention be called to the fact?*

ANSWER. Yes. Operators must not change their copy of an order to agree with the way it is repeated by some other operator, but they must call attention to the wording as received by them and allow the dispatcher to make the correction.

211. When a "19" train-order has been transmitted, operators must (unless otherwise directed) repeat it at once from the manifold copy, in the succession in which the several offices have been addressed. Each operator receiving the order should observe whether the others repeat correctly. When the order has been repeated correctly by an operator, the response "complete," and the time, with the initials of the superintendent, will be given by the train dispatcher. The operator receiving this response will then write on each copy the word "complete," the time, and his last name in full, and personally deliver a copy to each person addressed without taking his signature. When necessary, the engineman's copy may be delivered by the conductor. In such cases, the conductor must endorse his name on the copy to be retained by

the operator, and the engineman must sign the conductor's copy.

NOTE.—A "19" train-order must not be addressed to a superior train holding it for an inferior train in the opposite direction, unless first addressed to the operator at the meeting point and issued for the superior train before it reaches such station. Copies of the order addressed to the operator at the meeting point must be delivered to all trains affected until all moving in one direction have arrived, when, if there are no other orders in effect at that station, the train-order signal must be changed to "proceed."

*Question Number 623. To whom must operators deliver "19" orders?*

ANSWER. They must personally deliver them to the persons addressed.

*Question Number 624. If an engineman is out of reach, may his copy be delivered through the conductor, and in what manner?*

ANSWER. The operator may deliver the engineman's copy to the conductor when necessary. But he must require the conductor to endorse his name on the copy retained, so as to have a record of the manner in which the delivery was made. There being no place specially provided on a "19" order for signatures, the conductor will sign wherever he finds convenient space.

*Question Number 625. What is further required of the conductor?*

ANSWER. He must deliver a copy of the order to each of his enginemen and take their signatures on the copy he retains, as in the case of "31" orders.

*Question Number 626. If an operator is offered*

*a "19" order for a train, the engineman of which is out of reach, what should he do?*

**ANSWER.** He should advise the dispatcher, who will then, if practicable, issue a "31" order instead of the "19" order, as the "31" form provides space for signatures.

*Question Number 627. If an operator receives both a "19" and "31" order for a train, may he deliver the "19" to the engineman before obtaining the signature of the conductor to the "31"?*

**ANSWER.** He must not deliver copy of the "19" order to the engineman until the conductor has endorsed the "31." If the engineman is not then at hand, the operator may also deliver the "19" order to the conductor for the engineman, taking the conductor's receipt in the manner perviously explained, and the conductor must then have each of his enginemen receipt for his copy.

*Question Number 628. May "19" orders be issued at initial stations where enginemen seldom report before starting?*

**ANSWER.** Yes; operators may make delivery through the conductor.

*Question Number 629. In what way may a "19" order be used to hold a superior train for an inferior train in the opposite direction?*

**ANSWER.** By first addressing the order to the operator at the place of meeting and issuing the order for the superior train before it reaches such station.

*Question Number 630. In such cases, what is re-*



*quired of the operator at the meeting or waiting station?*

ANSWER. He must display one or both order-signals at "stop," as the order requires, and deliver copies of the order to all trains affected, until all have arrived that are moving in one direction—it makes no difference which direction—then, if no other orders are in effect at such station, the train-order signal must be restored to "proceed."

*Question Number 631. When an engineman has a conductor, from which person may he accept "31" orders received at a telegraph office?*

ANSWER. From his conductor only.

*Question Number 632. When an order is addressed to his train at a blind siding in care of some person, may he accept it from such person?*

ANSWER. Yes; and if it be a "31" order, he must then sign the copy retained by the person in whose care the order is addressed.

*Question Number 633. From which two persons may an engineman accept "19" orders received at a telegraph station, and from which persons may he accept them at other points?*

ANSWER. At the telegraph stations, they may accept "19" orders only from their conductor or the operator, and at other points, only from their conductor or the person in whose care the order is addressed.

LECTURE ON THE "19" AND "31" FORMS OF TRAIN ORDERS. So far as the order itself is concerned, there is no difference between the "19" form and the

“31” form; but the “31” form requires that the signature of the persons addressed be transmitted to the dispatcher, and the “19” form does not. The Train-Rule Committee of the American Railway Association will, doubtless, agree that there is no movement made by the use of the “31” form that cannot also be made with the “19.” Any train order must be respected, without regard to whether it be on green or yellow paper, or whether it has or has not been receipted for. If through error, necessity, or bad judgment a train be deprived of its superiority by use of the “19” form, the order must be accepted and obeyed. And, while a train may thus lose right or have right conferred upon it by either form (and such orders must be respected without regard to whether given by “19” form or “31” form), ordinarily, the “31” form must be used when a train is to be made inferior, and the “19” form only used when, if not delivered, nothing worse than a delay would result. The possibility of delay, through failure in the delivery of such orders, should not, however, be seriously regarded, as there are so many advantages in the use of “19” orders to offset the very rare chance of failure—which, the records show, has only been about one in a hundred thousand orders. There has been a corresponding number of failures in the delivery of “31” orders.

A meeting point must not be made at a telegraph office, or a blind siding, by using “19” orders for all trains. The superior train must be given a “31” order and the inferior train may be given either a “19” or a “31.” There is an exception to be made, however, when a train order is to be first given to

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the operator at the meeting station ; then a "19" may be used for either train. Extra trains must not be met by using "19" orders, unless the order is first addressed to the operator where they are to meet and is issued for all extra trains concerned before they reach the place of meeting, as there are no "superior" extra trains. A "19" order may be addressed to a train at the train-order meeting point, changing the place of meeting to some station beyond, as such train cannot leave without the order, unless the train which it was previously directed to meet at such station has arrived. A "19" order may be used to authorize a train to run extra, or for one train to pass another, as, in the absence of notice, the train so passing must protect itself, if it stops or is delayed. This is a no more serious restriction than that provided for in Rule 93. It is an open question whether it is best to require any freight train to have an order to proceed ahead of a superior freight. The claim is made, and with good reason, that the order to run ahead makes the crew receiving it lax in their observance of Rule 99. The "19" form may be used for "slow" orders, where but one order awaits the arrival of a train at any station ; or to notify trains of cattle on the right-of-way, or of a water-supply failure ; or for train movements where no accident could happen through non-delivery of the orders. They must not fail to be delivered, however, nor must the impression prevail that it is unnecessary to display the train-order signal at "stop" for such orders, or that their delivery is not as important as the delivery of "31" orders ; failure in either case deserves equally severe censure.

In the event of a broken rail, a burned bridge, a washout, or other defect of track, where trains must reduce speed to less than thirty miles an hour, the "31" form is the proper one to use for the purpose of notifying them. The "19" form was framed with the view to helping trains without stopping them, as they are generally delivered to trains while they are in motion, unless they happen to be standing at a station waiting for orders. As the "19" order does not of itself clear a train, so long as the order-signal indicates "stop," and as the operator must not change the signal to "proceed" until the order is delivered to both the engineman and conductor, a clearance-card must be delivered with such orders, stating over the operator's signature that there are no further orders for the train, except when he can deliver the order to both the engineman and conductor and change the signal to "proceed" within their view. A "19" order should not be issued to a superior train, directing it to take the siding and meet an inferior train, even though the same order be issued to the operator at the meeting station, as in case of failure in the delivery of the order to the superior train before it reaches the meeting point, it would then hold the main track as far as the order signal, with the possibility of collision with the inferior train.

As far as possible, dispatchers should avoid issuing both "19" and "31" orders for the same train at the same station, since a train can be cleared by clearance-card on delivery of either order, with the signal at "stop," or the same result would follow if either be delivered, and the order signal then be

changed to "proceed." The train must be stopped anyway, to get the acknowledgment of a "31" order; so no time would be saved by issuing other orders on the "19" form, with the chance of the operator's delivering only the "19" order and then clearing the train. Operators should be instructed to guard against the danger of delivering "19" orders to enginemen, with or without a clearance-card, when they also have a "31" order for the same train. An engineman having received a "19" order might see the train-order signal changed to "proceed," although, without his knowledge, a "31" order had been delivered to the conductor, and, should an unauthorized starting signal be given, he might proceed before the conductor could reach him with the "31" order; while this would not be likely to happen if no orders were prematurely delivered to him. In cases where orders on both forms are awaiting the arrival of a train, operators must not deliver anything to the engineman until the conductor has acknowledged the "31" orders.

When a meeting or waiting point is fixed, by addressing the order to the operator at the meeting or waiting station, say at C, as well as to both trains, one on each side of it, say at B and D, respectively, the operator at the meeting point (C) must deliver copies of the order to the enginemen and conductors of all trains affected until he is positive that all trains moving in the same direction have arrived (and, in case the inferior train arrives first, until it is clear of the main track). He must then change his order-signal to "proceed," unless the order is also addressed to a train, or there are other

orders in effect at that station. If it is a meeting order, the operator will display both order-signals; if a time order, he will display only that signal which will stop the train which is to be held. When the time given in a waiting order has expired the operator will change the order-signal to "proceed," without regard to whether the train to be waited for has arrived or not; provided, always, that the order is addressed only to the operator. If his clock is not reliable, he should obtain correct time from the dispatcher before restoring the order-signal to "proceed."

It is proper and often necessary to issue a "31" order for one or both trains and to address the same order to the operator at the meeting point on the "19" form. It is also proper to address a "31" order to an operator and to trains at his station; the same order may also be issued on the "19" form for trains which have not yet reached his station.

Should a train reach a station and find the order signal at "stop," and an order addressed only to the operator should be delivered to it, a copy of which it had not previously received, stating that the train will meet or wait for some other train at that station, or wait for a work extra until a certain time has elapsed, such order must be accepted and understood as holding the train thus notified, as there may have been a failure in the delivery of orders to the superior train before reaching such station. It must be understood, however, that an order, when only addressed to the operator, simply holds the train. Orders conferring right must be addressed to the trains that are to execute them, as prescribed by Rule 204.

A "19" order is sometimes as safe as a "31" order when but one order is issued; but when more than one is to be given a train at the same station, the "31" form is the safer, for the reason that an acknowledgment of all the orders is obtained from all concerned. The single "19" is theoretically as safe as the single "31," as the train addressed cannot pass the order-signal without an order while it indicates "stop," and the "19" form of order can reach it just as well as any other.

On the question of extending the use of the "19" form of train-order and addressing it to operators at meeting points, and to trains interested in the movement, the author wishes to record his unqualified endorsement of the practice, having successfully used it for twenty-five years on a single-track road where seventy or eighty trains were moved daily with entire safety and with considerable advantage in the matter of time saved. The fact that several of the largest roads in the Middle West have adopted rules requiring meeting orders to be addressed to the operator at the meeting point, in addition to the superior train before it reaches such station, would seem to indicate that there is something lacking in the Code rules in this respect, or that meeting points are likely to be overlooked by train and enginemen if this precaution is not taken. It must be evident to every one that two order-signals against trains are safer than one. If a "31" order be issued and the crew forget the meeting point, a collision is possible; but give the same train a "19" order addressed also to the operator at the meeting point, and the safeguards

against accident are greatly increased, for even should the superior train forget the order, the operator's signal at the meeting point is displayed at "stop," and remains so displayed until all the trains going in one direction have arrived.

In meeting freight trains, much time can be saved by using "19" orders. It requires from ten to twenty minutes to get signatures to "31" orders, and on grades there is also further delay in getting under headway. This can be avoided by using "19" orders to fix meeting points, addressing them to all trains and in duplicate to operators at places of meeting. Something can also be saved in expense of operation, as it costs from twenty-five to forty cents to stop a freight train to get acknowledgment of orders. In connection with this plan of using "19" orders, the semaphore form of train-order signal should be used, and dispatchers must not be tied down too closely by instructions. Should it be necessary in certain rare cases to instruct operators to allow a train to pass an order-signal by changing it to "proceed" for a brief interval of time, the dispatcher should be allowed to so instruct them. The Code rules now permit operators to do this, without instructions from any one, when the normal position of such signals is at "stop."

211 (A). Conductors and enginemen must show all train orders to brakemen and firemen.

*Question Number 634. To whom must conductors and enginemen show all train-orders?*

ANSWER. On passenger trains, the conductor must show his train-orders to his brakeman and flag-



man (including train porters, when they perform the duties of brakemen). The engineman must show his orders to his fireman. On other trains, the conductor must show his train-orders to his rear brakeman or flagman, and the engineman must show his to his fireman and the front brakeman.

*Question Number 635. What is required of firemen, brakemen, flagmen and train porters (if also brakemen) with regard to reading train-orders and observing fixed and other signals?*

ANSWER. They must read all train-orders and keep them in mind; and should there be occasion to do so, they must remind their engineman or conductor of such orders. They must also observe train-order, semaphore, switch and other fixed signals and all train signals, and call attention to anything likely to endanger their train. It is especially important that firemen should note signals which may be visible to them, but not to their engineman.

212. A train-order may, when so directed by the train dispatcher, be acknowledged without repeating, by the operator responding: "X; —— (Number of Train Order) —— to — (Train Number) —," with the operator's initials and office signal. The operator must then write on the order his initials and the time.

*Question Number 636. When must the "X" response be transmitted, and how?*

ANSWER. When the dispatcher has so indicated by saying "X" after transmitting an order. The operator then replies, "X Order No 25 to No 2, J. B. F. Dv.," and must then write on such order the time and his initials.

*Question Number 637. Are operators required to "X" an order unless so directed by the train dispatcher?*

ANSWER. No. They repeat them in their turn, as the rules prescribe.

*Question Number 638. Is any record to be made when operators do not send the "X" response?*

ANSWER. That part of the form providing for the "X" response is simply left blank.

213. "Complete" must not be given to a train-order for delivery to an inferior train until the order has been repeated or the "X" response sent by the operator who receives the order for the superior train.

*Question Number 639. Before sending "complete" to an order for an inferior train, what precaution must the dispatcher take to insure that the order is not delivered to the inferior train until the superior train has received it?*

ANSWER. The order must be repeated or the "X" response sent by the operator who receives the order for the superior train.

*Question Number 640. May the dispatcher complete an order for an inferior train, giving it until a certain time to make a station for a superior train, or running a superior train late, without first having the order repeated or "X-ed" for the superior train?*

ANSWER. No, even though the superior train cannot reach the point by the time named, or overtake the time in the "run late" order.

*Question Number 641. What precaution should the dispatcher take in annulling a train?*

ANSWER. Before sending notice of the annulment of a train to other trains interested, he must first address the order to the train annulled, if on the road, or, if it has not started, to all trains concerned at the initial station of such train.

214. When a train order has been repeated or "X" response sent, and before "complete" has been given, the order must be treated as a holding order for the train addressed, but must not be otherwise acted on until "complete" has been given.

If the line fails before an office has repeated an order or has sent the "X" response, the order at that office is of no effect and must be there treated as if it had not been sent.

*Question Number 642. When does a train order become a holding order?*

ANSWER. As soon as it is repeated, or as soon as the "X" response has been sent; and this rule applies equally to "19" orders and "31" orders.

*Question Number 643. Does the mere fact of an operator having repeated an order, or having sent the "X" response, make such order a holding order for the train addressed, until "complete" is given?*

ANSWER. Yes; even if the order were addressed only to the operator, the effect would be the same. He could not act further than to hold the train affected.

*Question Number 644. When operators "X" an order, must they also repeat it?*

ANSWER. Yes, as soon as they get the circuit they must repeat the order.

*Question Number 645. Should operators certify to the repetition of an "X"-ed order?*

ANSWER. Yes, they should endorse on "31" orders that they have been repeated, but they should be careful not to do so until they have actually repeated them.

*Question Number 646. May a "31" order be delivered without the time of its repetition being shown?*

ANSWER. No; the time it was repeated must first be properly entered in the place provided for it on the blank form.

*Question Number 647. After an operator has repeated an order, or has sent the "X" response, is any reply required from the dispatcher, before such order becomes a holding order?*

ANSWER. No response is needed; to require it would be unsafe. Operators must understand that after they repeat an order, or send the "X" response, they become responsible for holding the train to which the order is addressed.

*Question Number 648. If an operator has not repeated an order, or has repeated only a part, and the line fails, is it then a holding order?*

ANSWER. No.

*Question Number 649. If an operator repeats an order, or sends the "X" response, and afterward finds that the wire is not working through to the dispatcher's office, so that the dispatcher probably did not hear him repeat it, must such order still be treated as a holding order, even if it be a "19" order?*

ANSWER. Yes; the operator has done his part. He is not to assume that the dispatcher did not hear the repetition; he may have heard it and given "complete" to the order for some inferior train, although this is contrary to Rule No. 213. Should the dispatcher fail to hear an operator repeat or "X" an order for a superior train, he must have him do so before "completing" it for inferior trains.

*Question Number 650. If, after an operator has repeated an order, or sent the "X" response, the wires fail, may he "complete" such order after obtaining signatures?*

ANSWER. No; after repeating an order, or sending the "X" response, it becomes a holding order until completed by the train dispatcher.

*Question Number 651. If the wires fail and the operator cannot obtain "complete," may he release the train addressed after the time named in the order has expired, or after the train the order directs to be met, has arrived?*

ANSWER. He may not release the train unless the dispatcher has previously authorized "complete," conditional upon its being endorsed on the order after signatures have been obtained.

*Question Number 652. If the order directs a train to meet or wait for a regular train, and the wires fail before "complete" is given, may the operator and others disregard the order and may the train which is waiting to receive it proceed, after the regular train to be met becomes twelve hours late and has failed to arrive?*

ANSWER. Under Rule 220, after a regular train

becomes twelve hours late all orders concerning it become void. It is unnecessary to wait for a train which has lost right and class.

*Question Number 653. If the order be addressed only to the operator, and he repeats it or gives the "X" response to it, and the wires fail before "complete" is obtained, does such order hold the train affected?*

ANSWER. Yes; such orders become holding orders, but must not be otherwise acted on until "complete" is obtained.

*Question Number 654. Must all orders show that the "X" response has been sent to the dispatcher, and must that part of the form be properly filled out, before train and enginemen may accept them?*

ANSWER. No. The "X" response is only used to save time when the dispatcher desires to move the inferior train and does not care to wait for the operator who receives the order for the superior train to repeat it.

*Question Number 655. Must conductors and enginemen note whether the "31" orders delivered to them show that they have been "repeated"?*

ANSWER. Yes. Those who receive train orders should see that they conform to Rule 201.

215. The operator who receives and delivers a train order must preserve the lowest copy.

*Question Number 656. What record must operators keep of train orders received and delivered by them?*

ANSWER. They must preserve the lowest copy.

*Question Number 657. How should the forms be filled out?*

ANSWER. They must be numbered, dated, addressed, signed, completed and then signed by the operator. The superintendent's initials must appear at the bottom, and "31" orders must show when they were repeated: If the "X" response is sent, this must also be endorsed on the order.

*Question Number 658. When must trainmen and enginemen turn in their orders?*

ANSWER. At the end of each trip, in order that they may be compared for correctness in form and for legibility.

NOTE.—If defects are found, the person at fault should be further instructed and cautioned.

216. For train orders delivered by the train dispatcher the requirements as to the record and delivery are the same as at other offices.

Such orders shall be first written in manifold so as to leave an impression in the record book, from which transmission shall be made.

*Question Number 659. When orders are delivered personally by train dispatchers, what record must be made?*

ANSWER. The requirements as to record and delivery are the same as at other offices.

*Question Number 660. Should it also be necessary to transmit such orders to trains on the road, how must it be accomplished?*

ANSWER. Such orders shall be first written in manifold so as to leave an impression in the record-book, from which transmission shall be made.

*Question Number 661. Is there any objection to dispatchers using "19" orders exclusively when they are to personally deliver them?*

ANSWER. No.

NOTE.—This rule can be complied with by the dispatcher copying the manifold order in his book, laying a carbon on the page, but it is objectionable, as the impression is not made in the same way as he records other orders in the book, and the carbon soon rubs off. It would seem that dispatchers could be trusted to check these orders the same as they do others, nor do they always have time to conform literally to the rule.

217. A train order to be delivered to a train at a point not a telegraph station, or at one at which the telegraph office is closed, must be addressed to

*"C. and E. ——— (at ———), care of ———,"*

and forwarded and delivered by the conductor or other person in whose care it is addressed. When Form 31 is used "complete" will be given upon the signature of the person by whom the order is to be delivered, who must be supplied with copies for the conductor and engineman addressed, and a copy upon which he shall take their signatures. This copy he must deliver to the first operator accessible, who must preserve it, and at once transmit the signatures of the conductor and engineman to the train dispatcher.

Orders so delivered must be acted on as if "complete" had been given in the usual way.

For orders which are sent, in the manner herein provided, to a train, the superiority of which is thereby restricted, "complete" must not be given to an inferior train until the signatures of the conductor and engineman of the superior train have been sent to the train dispatcher.

*Question Number 662. Do you understand that a train may be helped from a point not a telegraph office by the use of either a "19" or "31" order?*



ANSWER. Yes. A train may be helped from any point by using either form.

*Question Number 663. If the "19" form be used, must signatures be obtained from the crew at the blind siding?*

ANSWER. No.

*Question Number 664. May "19" orders be delivered without stopping trains, if practicable?*

ANSWER. Yes; it would be an authorized movement, and there would be no element of danger in delivering in this manner; but proper delivery must be actually made, however, stopping the train if necessary.

*Question Number 665. How can conductors and enginemen at such points facilitate matters?*

ANSWER. They should be ready to receive orders when they see a train slowing down and know that their own train is delayed for want of orders.

*Question Number 666. Do you understand that a train may either have right conferred upon it or be held at a point not a telegraph station?*

ANSWER. Yes. A train may be made inferior or have right conferred upon it at any point.

*Question Number 667. If a train is to be made inferior at a point that is not a telegraph station, which form must be used?*

ANSWER. Form 31.

*Question Number 668. When an order is sent to a train at a blind siding, in whose care must it be addressed?*

ANSWER. In care of the person who is to make the delivery.

*Question Number 669. Must such orders always be addressed in care of some conductor?*

ANSWER. They may be addressed in care of any responsible employe. They are not always to be delivered by trains.

*Question Number 670. If addressed in care of the conductor of No. 2, who should sign it, and must the engineman of No. 2 also receive a copy?*

ANSWER. The order being addressed in care of the conductor of No. 2, should be acknowledged at the telegraph office only by him. The engineman of No. 2 does not require a copy; but the conductor must advise him where he should stop to allow delivery to be made.

*Question Number 671. State how a "31" order should be forwarded for delivery, beginning at the telegraph office where the order is issued?*

ANSWER. The person in whose care the order is addressed must sign it, and "complete" will then be given. The operator must supply sufficient copies—three copies if for one train. The person in whose care the order is addressed must obtain the signatures of the conductor and engineman to whom the order is delivered. The copy bearing their signatures must then be left at the first open telegraph office, and the operator there must immediately transmit such signatures to the train dispatcher.

*Question Number 672. How must the person in whose care the order is sent personally deliver the order?*

ANSWER. He must personally deliver it to both the conductor and engineman addressed and require each to sign the copy which he retains, without regard to whether the order holds or helps the train.

*Question Number 673. Must the conductor of the train held at such blind siding also obtain signatures from each of his enginemen?*

ANSWER. No.

*Question Number 674. After obtaining the signatures as mentioned, must the person in whose care the order is addressed again write the word "complete" on the order?*

ANSWER. No.

*Question Number 675. Where does the engineman sign his name in this case?*

ANSWER. In the same column as the conductor; each should also add the title of his position.

*Question Number 676. If the train addressed is found at some other station than the one indicated in the address, must the delivery be made?*

ANSWER. Yes; and the facts reported to the train dispatcher in writing, explaining what understanding was had with the crew addressed.

*Question Number 677. Does an order addressed to a train at a point not a telegraph station become void when the train bearing the order becomes twelve hours late?*

ANSWER. No. The order is addressed in care of some person—not train.

*Question Number 678. If an order gives a train time over some other train, but before the person in*

*whose care it is addressed can make the delivery, the time given in such order expires and will be of no benefit to the train addressed, must the order still be delivered?*

ANSWER. To fail in the delivery would not be complying with the rules.

*Question Number 679. If an order which has been scratched or mutilated, or is indistinct, is thus delivered to a train at a non-telegraph station, how should the train be governed?*

ANSWER. The same as if received at a telegraph station. If the order would make the train inferior, it should be treated as a holding order merely. If "right" is conferred, the train may decline to act on it, and the person in whose care the order is addressed will be held responsible for accepting such an order from an operator.

*Question Number 680. When may the dispatcher understand that a train is held at a point that is not a telegraph office?*

ANSWER. After he has received the signatures of the conductor and engineman of such train so held, and not until then, as the person in whose care the order was addressed might not have been able to reach the station named, or might not have found the train there. The inferior train, upon which "right" was to be conferred, must not be allowed to act on the order until the signatures have been obtained from the conductor and engineman of the superior train.

LECTURE. All "31" orders must be signed by the conductors and enginemen addressed, when-

ever sent to them in care of some person. Conductors and enginemen must respect all orders delivered to them at points where there are no telegraph offices, the same as if the orders were issued for them at telegraph stations. If a "19" order is received, making their train inferior, it must be accepted and respected the same as if it were a "31" order.

218. When a train is named in a train order, all its sections are included, unless particular sections are specified, and each section included must have copies delivered to it. When practicable, each section will be specified.

*Question Number 681. When a train is named in a train order, how many sections are included?*

ANSWER. All sections, unless particular sections are specified.

*Question Number 682. If an inferior-class train, running in sections, is given a meeting order with a superior-class train, or right over it, without the sections being specified, must each section of the inferior-class train which is displaying signals call the attention of the superior-class train to such signals?*

ANSWER. Yes. The superior-class train is then the train of inferior right.

*Question Number 683. Must the sections be specified when practicable?*

ANSWER. The Code rules do not require it, and, technically, it may seem proper not to do so. But unless the attention of operators is called to the sections, they are apt to get the impression when an order is given them, addressed to "No. 1," that there

is but one section, and change their order-signal to "proceed," after delivering the order to the first section. They seldom examine the signals on the fronts of engines—often are situated so that they cannot leave their offices to do so. It is better, therefore, to specify the sections when practicable.

*Question Number 684. If an order is addressed to No. 1, and the train is running in sections, to whom must the operator deliver it? May he destroy the original order upon discovering that the train is running in sections, and make new copies, addressing them to each section instead of to No. 1?*

ANSWER. He must deliver to all sections copies of the order as he received it; he must not destroy the order and make new copies, addressing them to the sections, as he does not know how many sections there may be, but must deliver it to each section as originally addressed.

*Question Number 685. If No. 1 receives an order to meet No. 16, and first No. 16 arrives, what must be understood with regard to the other sections?*

ANSWER. No. 1 must wait for all the sections.

*Question Number 686. No. 1 is given right over No. 2, A to E, and finds 1st No. 2 at C; in that case must No. 1 wait at C for the other sections of No. 2?*

ANSWER. No. No. 1 has right over No. 2, which, of course, includes all its sections.

*Question Number 687. If No. 1 has been given right over No. 2, and 1st No. 1 is met, is No. 2 to wait for all sections of No. 1?*

ANSWER. Yes,

*Question Number 688. If 1st No. 1 only were given right over 1st No. 2, what would be the effect on both trains when they met each other, as far as the other sections are concerned?*

ANSWER. 1st No. 1, being the inferior train, could not proceed farther; 1st No. 2, being superior, would have authority to proceed, disregarding the other sections of No. 1, except as provided in Rule 90.

*Question Number 689. If a meeting point is fixed between No. 1 and No. 2, and both trains consist of sections, what effect does the order have upon all sections?*

ANSWER. All the sections of each train must proceed to the meeting point and wait indefinitely for all sections of the opposing train to arrive.

219. Unless otherwise directed, an operator must not repeat or give the "X" response to a train order for a train, the engine of which has passed his train-order signal, until he has ascertained that the conductor and engineman have been notified that he has orders for them.

*Question Number 690. Before an operator repeats or gives the "X" response to a train order for a train, the engine of which is opposite to, or has passed his train-order signal, what must he ascertain?*

ANSWER. He must ascertain that the conductor and enginemen have been notified that he has orders for them, and must know that they understand that they are to wait for such orders.

*Question Number 691. What must conductors*

*and enginemen understand, after having received such notice?*

ANSWER. They must not leave the station without the order, and, unless in position to see the order signal at "proceed," a clearance-card also.

*Question No. 692. Should there be no orders issued after such notice is given, what is required before the train can leave the station?*

ANSWER. If the train-order signal is not at "stop," the train must be informed by the operator that there are no orders for it. A clearance-card may be given in such cases, timed after the notice to wait for orders was given.

*Question Number 693. May the operator understand that a train is properly held by simply notifying the conductor in cases where the engine has passed his order signal displayed at "proceed"?*

ANSWER. No; and the conductor must not inform the operator that the train is properly held until he has gone to his engineman and notified him; as, in an emergency, an engineman may have had to run out on the main track beyond the initial switch.

*Question Number 694. When notified by some one else than the operator that there are orders for a train at a station, what must the conductor and engineman of such train understand?*

ANSWER. That their train is to be held in the same manner as if they were personally notified by the operator.

*Question Number 695. If the engine of a train has passed an order signal at "proceed" and it be-*



*comes necessary to hold such train and the dispatcher cannot wait until the operator has notified both the conductor and engineman, on account of the conductor being at the rear of his train protecting it, what may the operator do?*

ANSWER. He may require the engineman to endorse his name on the holding order as an acknowledgment that he has been notified of such order. The train may then be understood to be properly held, but the operator must get notice to the conductor as quickly as possible. Enginemen must endorse all such orders when requested to do so. Afterward the order will be delivered to them in the regular manner.

*Question Number 696. If operator has cleared a train, can he again hold it with his train-order signal if the engine has not passed the signal?*

ANSWER. No.

*Question Number 697. If a train has been cleared, and the order signal is afterward seen to be at "stop," should conductors and enginemen ascertain if there are further orders?*

ANSWER. When a train has been properly cleared it is not affected by the position of the order signal thereafter, unless notified that there are further orders. If the train has not passed the signal, or is near it, the crew would not care to leave such station, however, without knowing whether an attempt was being made to again hold the train, since in case of doubt they should take the safe side. Unless an order signal is at "stop" when the engine passes it, and the train has not been cleared, the operator

must distinctly understand that he cannot hold the train without first notifying the conductor and engineman of such train and assuring himself that they fully understand that they are held for further orders. Trainmen and enginemen are not required to return to an office to get a clearance on an order signal displayed at "stop," if such signal indicated "proceed" when their train passed it.

*Question Number 698. When would it be safe for an operator to acknowledge an order for a train, the engine of which has passed his order signal displayed at "proceed"?*

ANSWER. When instructed to do so by the train dispatcher, after reporting to him that the engine had passed his train-order signal; provided the dispatcher then states that the order is one without which the train cannot leave, or one which, if not delivered, would only delay the train.

*Question Number 699. If the order signal indicates "stop" when the train passes it, may the operator accept further holding orders for such train without first notifying the conductor and engineman?*

ANSWER. Yes, provided always that the order signal has not been changed to "proceed" after the train has passed it, and the operator has not cleared such train.

*Question Number 700. Sidings are sometimes so arranged that it is more convenient for a train to back out than to pull through them; at such stations, if a train has always backed out, would it be using good judgment to disregard a train-order sig-*

*nal which was displayed at "stop" after the engine had passed it and leave the station by pulling through the siding?*

ANSWER. The operator would be held responsible if he were to attempt to hold the train by displaying the order signal at "stop" after the engine of such train had passed it, but the crew should ascertain why the signal is at "stop," as it is an exceptional condition and there is a chance for a collision if such precaution is not taken.

LECTURE. It is better to be more conservative than the rules actually require in giving instructions concerning train-order signals. A rule may be perfectly sound theoretically, as this one is, and yet may at times cause men to hesitate as to the course they should pursue. It is customary, where the old style of order signals is used, for train and enginemen to require orders or a clearance card if the order signal is seen at "stop" at any time while their train is within station limits. Code rules do not require this, for the reason that by night, where semaphore order-signals are in use, their position cannot be ascertained by observing such signals after passing them. The rules have always required the operator to notify the conductor and engineman of a train before attempting to hold it, except when his order signal was at "stop" before the engine of the train passed it. Operators are not always as mature and experienced as train and enginemen, and they may not fully realize the danger of trying to hold a train when its engine is but a car length or so from the order signal; they may not keep in mind the fact that, not being inferior to opposing trains,

the engineman can run his engine out on the main track; or they may think they have ample time to reach the train before it can possibly get away from their station. There is no argument as to the duty of operators under the rule; the point to be seriously considered by trainmen and enginemen, however, when they see an order signal changed to "stop" after their engine has passed only a few car-lengths beyond it, is whether or not the operator is taking chances in accepting holding orders for their train, depending upon such signal to prevent the train from leaving the station. Therefore, when in doubt, train and enginemen had better go to the office upon seeing an order signal at "stop," except that if it be so displayed after their *entire train* has passed it—say, one-eighth of a mile—they need not do so, as then there simply can be no doubt. One objection to trainmen and enginemen going back to an office when an order signal is displayed at "stop," after their *entire train* has passed it, is that it may create an impression among operators that they can depend upon trains doing so in all cases, and it may encourage them to run risks.

220. Train orders once in effect continue so until fulfilled, superseded or annulled. Any part of an order specifying a particular movement may be either superseded or annulled.

Orders held by or issued for a regular train become void when such train loses both right and class, as prescribed by Rules 4 and 82, or is annulled.

*Question Number 701. How long do orders continue in effect?*

ANSWER. Until fulfilled, superseded or annulled.

*Question No. 702. May a part of an order be superseded or annulled and, if so, what effect does the superseding or annulling order have upon the remainder of the order?*

**ANSWER.** A part of an order may be superseded or annulled; the remainder of the order is unaffected.

*Question Number 703. When may an order which has been delivered be understood to be fulfilled?*

**ANSWER.** When the movements directed by the order have been executed; or the time given by it has expired; or a regular train has reached the end of its run; or extra trains have reached the station to which they had orders to run; or when helpers have cut off from the train they are helping.

*Question Number 704. After an operator has repeated an order, or sent the "X" response, when may he understand the order to have been fulfilled?*

**ANSWER.** If the order is only addressed and "completed" to the operator, it is fulfilled when all the trains affected by it and moving in one direction have arrived; or when the time named in the order has expired.

*Question Number 705. May operators "file" orders after the object for which they were issued has been accomplished?*

**ANSWER.** If addressed only to themselves they may understand such orders to be fulfilled after all trains affected by them and moving in one direction have arrived, or after the time named in the order has expired. But orders addressed to trains, or to

operator and train, must never be filed while such trains are authorized to be on the road. Such orders must be annulled in the regular way by the train dispatcher, or held until the signatures are obtained, if they be "31" orders, and must be properly completed and delivered to the trains addressed.

LECTURE. It is not safe to allow an operator to determine when an order which is addressed to a train is fulfilled; only the dispatcher or conductor and engineman of such train may so decide. There may be other orders in effect of which the operator may have no knowledge. An operator must not destroy an order addressed to a train when a later order is received for the train, though it may seem to annul the former order.

On a certain road a dispatcher instructed an operator to advise when a train which he had ordered to meet a train moving in the opposite direction was seen to be coming, adding that he might destroy or change the order. The operator misunderstood the instructions and destroyed the order addressed to the train which it was intended to hold, and a number of persons were killed. If orders had not been "filed," or verbal instructions had not been used before in connection with train movements, the accident would probably not have occurred.

*Question Number 706. When is an order superseded?*

ANSWER. When its terms are changed by another order, in which the words "instead of" are used.

*Question Number 707. May one order ever be*

*understood to supersede another unless the words "instead of" are added after stating the change intended?*

ANSWER. Never.

*Question Number 708. Not even in cases where they are numbered higher and timed later than a former order?*

ANSWER. No.

*Question Number 709. May one order sometimes be permitted to qualify another?*

ANSWER. Yes. For instance, if a work extra were given an order to work all day, protecting against certain trains, and afterward were given right over those trains for a time, the "right" order would qualify the protecting order, without superseding it, and the work extra would not be required to protect itself against such trains until the time in the "right" order had expired.

*Question Number 710. State cases where orders held by or issued for a regular train would become void?*

ANSWER. (a) If an operator were to receive an order addressed to Train No. 2 and before delivery is made a new time-table should take effect, and there was no train of that number on the new time-table, he must consider the order void after the new time-table takes effect. Under such circumstances, any train receiving an order to meet No. 2 would disregard such order after the new time-table took effect, as the order is thereby made void.

(b) If an operator holds an order for a regular train, he must consider it void when such train be-

comes twelve hours late on its arriving time, if there is a clear view and he is positive the train has not arrived. If there is not a clear view, he must not consider the order void until the train is twelve hours late on its leaving time. If a train holds an order to meet a regular train, such regular train may be disregarded after it becomes twelve hours late on its arriving time at the designated place of meeting, as the order then becomes void.

(c) If an order is addressed to an operator annulling a train, all orders he may have received for such train are thereby made void and he must destroy them. He cannot destroy them unless the annulment order is addressed to him personally or clearly indicated to be for him. When conductors and enginemen receive orders to meet trains such orders become void after they are given orders annulling the train they were instructed to meet or wait for.

(d) A train does not exist after it becomes twelve hours late, or when it has been annulled. If it does not have a corresponding number on a new timetable it loses right and class when the old time-table is superseded by the new. In all such cases orders held by or issued for such trains become void without being annulled, and the trains may be treated as if they had never existed.

(e) An order addressed to "all concerned," annulling a train, may be acted on by any one receiving a copy of such order.

*Question Number 711. May a train take down its signals displayed for a following section upon*



*receipt of an order annulling such following section?*

ANSWER. Yes, provided the annulling order is so worded that it is known that there are no sections following the one annulled. That part of the order directing signals to be displayed is made void by the annulling order.

*Question Number 712. If an order addressed to "all trains" or "all concerned" is delivered to a train, when must such order be understood to be void?*

ANSWER. When the train holding the order ceases to exist as a train.

*Question Number 713. When may an operator understand that such orders become void?*

ANSWER. When it is unnecessary for an operator to make further deliveries, the dispatcher should annul the order. An order addressed to "all concerned," annulling a train, is void after the train annulled becomes twelve hours late, and operators holding such orders may so understand. It is not necessary for the dispatcher to annul such orders.

*Question Number 714. If an operator has an order addressed to "all concerned" stating that No. 2 will run late, must he deliver No. 2 a copy?*

ANSWER. Certainly, as it is one of the trains "concerned."

*Question Number 715. Do the rules contemplate that an order should be addressed in this manner?*

ANSWER. No, nor do they contemplate trains being run in advance of their schedule; but it is

well known that orders are so addressed, and that trains do receive instructions to leave stations ahead of time.

221 (B). A fixed signal must be used at each train-order office, which shall indicate "stop" when trains are to be stopped for train orders. When there are no orders the signal must indicate "proceed."

When an operator receives the signal "31" or "19" he must immediately display the "stop signal" and then reply "stop displayed"; and until the orders have been delivered or annulled the signal must not be restored to "proceed." While "stop" is indicated trains must not proceed without a clearance card, Form A.

Operators must have the proper appliances for hand signaling ready for immediate use if the fixed signal should fail to work properly. If a signal is not displayed at a night office, trains which have not been notified must stop and ascertain the cause, and report the facts to the superintendent from the next open telegraph office.

Where the semaphore is used, the arm indicates "stop" when horizontal and "proceed" when in an inclined position.

*Question Number 716. What is the normal position of train-order signals under Rule 221 (B)?*

ANSWER. To indicate "proceed."

*Question Number 717. When trains are to be stopped for train-orders, what must the train-order signal indicate?*

ANSWER. "Stop."

*Question Number 718. When there are no orders, what must it indicate?*

ANSWER. "Proceed."

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ANSWER. "Stop."

*Question Number 718. When there are no orders, what must it indicate?*

ANSWER. "Proceed."

*Question Number 719. When an operator receives the signal "31" or "19," what must he immediately do?*

ANSWER. He must display his train-order signal at "stop."

*Question Number 720. How long must such signal indicate "stop"?*

ANSWER. Until all orders have been delivered, or until they are annulled or become void.

*Question Number 721. May the signal be changed to "proceed," to allow trains for which he has no orders to pass?*

ANSWER. No, not even to allow a first-class train to pass when the order signal is at "stop" for orders, though they are addressed to extra trains only.

*Question Number 722. May the dispatcher instruct the operator to change the signal to "proceed," to let certain important trains pass for which there are no orders, when to stop them would cause delay?*

ANSWER. The operator may accept instructions from no one modifying the rule. They must, however, go out and deliver clearance cards to all trains for which there are no orders, without bringing such trains to a stop, if practicable for them to do so.

*Question Number 723. While "stop" is indicated, what must trains have to allow them to proceed?*

ANSWER. A clearance card.

*Question Number 724. While "stop" is indicated,*

*may trains proceed without a clearance card upon receipt of an order addressed to or affecting them?*

ANSWER. Nothing except a clearance card will release a train from a train-order signal displayed at "stop."

*Question Number 725. If an operator delivers an order to a train and restores the order signal to "proceed" in plain view of engineman and conductor, must they then also have a clearance card?*

ANSWER. No.

*Question Number 726. If a clearance card is received reading, "I have no further orders for your train," does it clear the train?*

ANSWER. No; not unless it has already received at least one order.

*Question Number 727. If the order signal is then changed to "proceed," may the train go without the order referred to in the clearance card?*

ANSWER. It must have had at least one order, because the language of the clearance card clearly implies that an order has been received for the train, though it may have been lost.

*Question Number 728. How should a clearance card read to allow a train to proceed without orders while the order signal indicates "stop"?*

ANSWER. It should read, "I have no orders for your train."

*Question Number 729. If the train-order signal must be constantly displayed at "stop" while an operator has orders to deliver, what may be understood if it be changed from "stop" to "proceed"?*

ANSWER. Either that the orders at such station have been delivered, or else that they have been annulled.

*Question Number 730. Then, if trains cannot proceed without a clearance card while "stop" is indicated, what do they require for them to go if the "stop" signal is changed to "proceed" within their view and nothing has been delivered to such train?*

ANSWER. They require only a proper signal from the conductor. The operator must not change the order signal to "proceed" until he has delivered all orders, as required by the rules; and the conductor must not give his engineman the signal to start until he has personally delivered to him all orders entrusted to his care.

*Question Number 731. A train arrives at a station at 8.00 a. m. and finds the order signal at "stop"; the signal is changed to "proceed" at 8.30 a. m., and the train is ready to go at 9.00 a. m. The conductor and engineman have not reported at the office and have received no orders. May the train proceed without a clearance card?*

ANSWER. Yes.

*Question Number 732. Is there any objection to the conductor and engineman having a clearance card, should they feel uneasy about leaving a station without one, under such circumstances?*

ANSWER. No; they may be given one if they ask for it. Clearance cards may be issued at any time when called for if by so doing it is possible to remove any occasion for doubt and delay.

*Question Number 733. A train taking a long siding passes an order signal indicating "stop," and afterward observes such signal displayed at "proceed"; what does the train require before it can leave the station?*

ANSWER. It requires only a proper signal from its conductor. The operator cannot change the signal to "proceed" until he has delivered all the orders, and the conductor cannot signal his engine-man to start until he has delivered the orders to him if there are any orders for the train. If no orders are delivered to the train on the long siding before the order signal is restored to "proceed," the only inference is that the orders were for some other train or have been annulled.

*Question Number 734. A train passes a train-order signal while it indicates "proceed," but on looking back after the entire train has passed it, it is observed to indicate "stop," what must the train have to enable it to proceed?*

ANSWER. Simply a proper signal from its conductor. It is not necessary to delay the train by going back to ascertain what orders are awaiting trains at that station.

*Question Number 735. If the operator hands several "19" orders to the engineman and conductor of a train as it passes his station, what method of delivery should he use?*

ANSWER. He must pin all the orders together, and also attach a clearance card stating that he has no further orders for such train.

*Question Number 736. If a clearance card is*



*not delivered and the order signal is not changed to "proceed," what must be understood?*

ANSWER. That there are further orders, and the train must stop.

*Question Number 737. If an order signal is at "proceed" when the engineman passes it, but afterward is changed to "stop," should the conductor, having not yet passed the signal, be governed by the change?*

ANSWER. Yes; he must stop the train. It may be that the signal was overlooked by the engineman, or the operator may have turned it at the time the engine was passing it.

*Question Number 738. May an operator change his signal as the middle of the train passes it, with the understanding that a train can be held in this manner, or, thinking that, as the conductor had not gone past it, his train would therefore be held?*

ANSWER. He might do so if necessary to prevent an accident, but not at other times. The conductor may be on the engine with the engineman, and would not know that "stop" was indicated. The operator must use hand signals in addition. The train is not held until the men in charge of it are notified.

*Question Number 739. If the brakeman at the rear sees a signal changed to "stop" after the engine has passed it, must he stop the train if his conductor is on the front of the train?*

ANSWER. He should not be censured for doing so, but would be more likely to assume that his conductor has been cleared and would be justified in

allowing the train to proceed; but if a hand signal to stop were also given by the operator, the brakeman must certainly stop the train.

*Question Number 740. Must the engineman receive a clearance card with the orders delivered to him by his conductor if the signal indicated "stop" when he passed it, and he is not in position to observe its indication when the orders are delivered to him, even though the signal may have been changed to "proceed"?*

ANSWER. He may accept the statement of his conductor as to the position of such signal at that time; there can be no objection to his also receiving a clearance card.

*Question Number 741. If a train-order signal is not displayed at a night office, or at any station where it is required to be kept displayed, and no previous notice of its discontinuance has been given, what must be done?*

ANSWER. The train must stop and ascertain the cause of the signal's absence and report the facts to the superintendent at the next open telegraph office.

*Question Number 742. If the operator is not at hand at such office, what should be done?*

ANSWER. The signal lamp should be lighted and the train then be governed by its indication.

*Question Number 743. Must the lights on all order signals always govern trains?*

ANSWER. Yes; and when indicating "stop" they should always be obeyed, even though the point where they are displayed is not a night office.

*Question Number 744. By night, should the signal blade indicate "stop" at a station which is not a night office, and no light displayed, what must be done?*

ANSWER. The train must stop and ascertain the cause.

*Question Number 745. By night, at offices which are not indicated on the time-table as regular night offices, may the operator depend entirely upon his order signal to hold trains?*

ANSWER. No; he must also use torpedoes and hand signals.

*Question Number 746. What is required of operators in case the fixed signals should fail to work properly?*

ANSWER. They must have the proper appliances at hand and give signals by hand.

*Question Number 747. What signal appliances must be kept ready for use at offices?*

ANSWER. A red light must be kept burning at night offices and red fuseses and torpedoes must be kept at hand at all telegraph offices.

*Question Number 748. When there is a storm and the order signal cannot be plainly seen, what extra precautions must be taken when it is necessary to stop trains?*

ANSWER. Torpedoes to signal "stop" must be placed on the rail between 500 and 1,000 feet from the station, in one or both directions, as may be necessary, and red fuseses must also be used if the conditions require it—for instance, during a bliz-

zard. Should the red lantern fail, a red fusee can be ignited very quickly and is much more effective than a lantern.

*Question Number 749. May operators signal a train to hold the main track, without being so instructed by the train dispatcher?*

ANSWER. No; it may have been ordered to take the siding for a train without the operator's knowledge, and may take such signal to mean that the meeting point is to be changed to a station beyond.

*Question Number 750. Where the semaphore pattern of train-order signal is used, what position, or light, means "stop"?*

ANSWER. The arm in a horizontal position, or a red light; the arm extending to the right of the post as viewed from an approaching train.

*Question Number 751. What position, or light, indicates "proceed"?*

ANSWER. The arm in an inclined position, or a green light; the arm seen on the right of the post as viewed from an approaching train.

*Question Number 752. If a red light be observed as such signals are passed, and a green after passing, what must be understood?*

ANSWER. The light seen before passing the signal must govern.

*Question Number 753. It is sometimes necessary to place train-order signals in such a position with reference to the switch which they control, as that opposing trains must pass the order signal before reaching the switch where they take the siding to*

*meet trains; what precautions must be taken at such places?*

ANSWER. Trains observing a signal so placed and indicating "stop," must not pass the switch governed by it and which must be used by trains in the opposite direction in going on the siding until it is ascertained why such signal is displayed at "stop." The train which is to take the siding must also remember that the opposing train may pass the switch during a storm and must therefore proceed carefully.

*Question Number 754. May the dispatcher issue an order reading, "No 1 gets this order and will meet No 2 at C, instead of D," meaning for No. 2, the superior train, to understand that No. 1 will occupy the main track at C, and that No. 2 must pull into the siding?*

ANSWER. There is no objection to sending such information, but where a train is thus to be held and receives no notice until it arrives at the point of meeting, and is on the main track, therefore, instead of on the siding, the dispatcher must in all such cases instruct the opposing train to take the siding; thus, "No 2 will take siding and meet No 1 at C instead of D," adding, if necessary, "No 1 gets this order at C."

LECTURE. Dispatchers should familiarize themselves with their territory and avoid issuing the order for the superior train at such dangerous places. As far as practicable they must send the meeting or waiting order to the superior train before it arrives at the meeting-point. Nor should the order signal

at the meeting point be depended upon alone to hold trains in such emergencies, but the operator should be instructed to flag the superior train by hand-signals sent out early enough and far enough to ensure safety. As a further safeguard and a warning to the other train to approach the meeting point under control, it should with its order also receive information that its opposing train (or the train which should take the siding but will occupy the main track because of no advance notice that the meeting point has been changed), will not get its copy of the (new) meeting-point order until it arrives at the station where it is to wait.

*Question Number 755. When one operator relieves another, must he be furnished written information as to all orders in effect at such station; all overdue trains which have not passed, and all messages undelivered?*

ANSWER. This should be given him on the form provided. (See Form in Appendix.)

NOTE.—The Train Rule Committee has submitted two rules, 221 (A) and 221 (B), governing train-order signals, as some managers prefer to have the normal position of such signals at "proceed," while others desire to have them indicate "stop." The latter plan is perhaps the better one when a sufficient number of operators is furnished to enable them to give prompt attention to the movement of trains; otherwise, trains may be sometimes stopped unnecessarily. There seems to be one thing lacking in Rule 221 (A), however, namely, some provision for using clearance cards; there is no objection to their use, and they are recommended. When there are several trains at a station and the operator desires to clear only a part of them, he could in many cases do so more safely if he were allowed to simply issue to such as he is ready to release a clear-

ance card, instead of changing his order signal to "proceed." The rule is easily understood, and need not be further discussed here. It is quoted below:

"221 (A). A fixed signal must be used at each train-order office, which shall indicate 'stop' when there is an operator on duty, except when changed to 'proceed' to allow a train to pass after getting train-orders, or for which there are no orders. A train must not pass the signal while 'stop' is indicated. The signal must be returned to 'stop' as soon as a train has passed. It must be fastened at 'proceed' only when no operator is on duty.

"Operators must have the proper appliances for hand signaling ready for immediate use if the fixed signal should fail to work properly. If a signal is not displayed at a night office, trains which have not been notified must stop and ascertain the cause, and report the facts to the superintendent from the next open telegraph office.

"Where the semaphore is used, the arm indicates 'stop' when horizontal and 'proceed' when in an inclined position."

NOTE to Rule 221 (A).—The conditions which affect trains at stations vary so much that it is recommended each road adopt such regulations supplementary to this rule as may best suit its own requirements.

NOTE to Rules 221 (A) and 221 (B).—The Committee has recommended two forms of Rule 221, leaving it discretionary to adopt one or both of these forms according to the circumstances of the traffic.

222. Operators will promptly record and report to the train dispatcher the time of departure of all trains and the direction of extra trains. They will also record the time of arrival of trains and report it when so directed.

*Question Number 756. Must operators promptly record and report the arrival and departure of all trains?*

ANSWER. Yes; also the direction of extra trains.

*Question Number 757. At registering stations,*

*must they report whether or not regular trains register signals?*

ANSWER. Yes; thus, "2d No 2, green (or no signals), a 110, d 115."

223. The following signs and abbreviations may be used:

Initials for signature of the Superintendent.

Such office and other signals as are arranged by the Superintendent.

C & E—for Conductor and Engineman.

X—Train will be held until order is made "complete."

Com—for Complete.

O S—Train Report.

No—for Number.

Eng—for Engine.

Sec—for Section.

Psgr—for Passenger.

Frt—for Freight.

~~Min~~—for Minutes.

Jet—for Junction.

Dispr—for Train Dispatcher.

Opr—for Operator.

3l or 19—to clear the line for Train Orders, and for Operators to ask for Train Orders.

S D—for "Stop Displayed."

The usual abbreviations for the names of the months and stations.



## FORMS OF TRAIN ORDERS.

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LECTURE. Before taking up the train-order charts, attention may be called to a few general principles that should be kept in mind, and which will be referred to hereafter.

The theory upon which the Standard Code rules is based is that the same order which takes away precedence from a superior train, also, and at the same time, confers right upon inferior trains.

Orders not in proper form or so worded that they are ambiguous, or which admit of different interpretations, must not be accepted, unless with the understanding that they are to be treated only as holding orders until proper orders are issued in their stead.

The word "meet" has but one simple meaning. Trains ordered to meet must go to the place of meeting, but not beyond, and must without fail wait at such place for the trains which they are instructed to meet, even though it be at the end of single track and the entrance to double track.

Trains must be positively identified; and each engineman, fireman, conductor and brakeman should assist in the identification of their train by giving its number to trains interested. The dispatcher must, when necessary, add engine numbers;

this is a good means of identification, unless there are duplicate numbers. Extras identify themselves when their engines can be seen. It must not be assumed that because there is a train on a siding, the engine of which is displaying a certain kind of signals, it is the train that is to be met or waited for; the true fact must be known. If in doubt about an approaching train, stop it.

Identification must sometimes be established by circumstantial evidence. If a regular train were waiting only for No. 1 and a passenger train looking like it passes on its time, displaying markers, and without green signals on the front of the engine, it may be concluded to be No. 1. If it were a passenger extra, white signals would be displayed on the front of the engine and, ordinarily, a meeting point would have been fixed with such extra, or it would have to stop to ascertain what regular train it was meeting.

To run freight trains as sections of first-class trains, especially as the first section, is confusing, and should not be done when possible to avoid it; or, if done, trains interested should be advised, or at least those likely to mistake the freight thus running as a first-class train, for some second-class train which they hold orders to meet, or to which they may be superior. Ordinarily, a train register is depended upon to indicate whether trains which are superior by right or class have arrived. When a train is made inferior to helpers, work-trains, water-trains, etc., which make several trips during a day, care should be exercised to know that such trains of superior right are met on the trip on which the order

directs them to be met Train-registering tickets (Form 56, Appendix) may in such cases be used to advantage, stating that the extra has arrived on the trip as indicated in a certain numbered order; and they are also useful when trains turn back from points where there are no train registers.

The rules do not require that the direction of extra trains be stated, except when necessary; but very little is gained by omitting the information at any time, and it would be better to habitually indicate the direction in which they are moving whenever they are mentioned.

#### CHART NO. 6.

*Order No 1.*

*No 15 and Extra 455 west will  
take siding and meet No 16  
and Extra 452 East at B.*

When extras are traveling in company with regular trains, and a meeting point is fixed, as shown by Chart No. 6, the dispatcher should indicate which train is to take the siding, unless it is intended that only the trains entitled to the main track under the rules shall hold it. In the absence of such designation, trains which by time-table are inferior must take the siding, otherwise, if No. 16 were to receive an order to meet No. 15 at A, instead of B, Extra 452 East could easily collide with No. 15 at B, if such extra were to hold the main track at B on the assumption that No. 15 would take the siding for No. 16.

Briefly stated, the seven governing principles re-

lating to the movement of trains under train orders are :

FIRST. Meet does not mean anything but *meet*, even at the end of double track. A train is not met until the markers arrive, and until met, the waiting train may pass the meeting point only after receiving notice of the annulment of such opposing train ; or after such train becomes twelve hours late ; or after the order to meet is annulled ; or after a new time-table takes effect while waiting, showing that there is no such opposing train ; or after an order is received against such train, in which the words, "instead of" appear, thus superseding the "meeting" order.

SECOND. Regular trains must be positively identified by their numbers, except as previously explained ; and extra trains by their engine numbers.

THIRD. Orders are in effect until fulfilled, superseded or annulled. One order does not supersede another unless the words "instead of" be added. When an order has been superseded it must not again be used. A part of an order may be either superseded or annulled, or one order may sometimes qualify another. Operators must never place on file an order addressed to a train.

FOURTH. Extra trains lose right when the last-named station mentioned in their "running orders" is reached, and they must pull into the siding at such station. Regular trains, and their sections, receiving train orders to run only to an intermediate station, lose their precedence upon their arrival at such station, and they must there pull into the siding. Every order held by such extra or regular

trains becomes void upon their arrival at the last-named station to which they are directed to run, and must not again be used. Orders held by work-extras become void when the working order expires. Orders are fulfilled when trains running under them arrive at the district terminal. Helpers lose all their authority to run when they detach themselves from the train they are helping, unless they hold separate orders; and all orders held by them, while running as a part of the train which they are helping, become void when they separate from the train.

**FIFTH.** Time-orders make trains inferior only within the time-limits named, and the same orders confer right upon other trains to which such orders are addressed, while within such time-limits, but not beyond.

**SIXTH.** Trains may be created at initial stations by a clearance-card or by train orders addressed to them, but at other stations they can only be created by train-order and not by a message or a clearance-card. When a schedule is given a train, by clearance-card or otherwise, it retains its schedule between the points designated, or, in the absence of designation as to limits, to the end of its run on the district, unless such schedule is taken away from it by train order.

**SEVENTH.** Orders not in proper form and which are not clear, if accepted, must be understood to have no further effect than as holding orders, in accordance with Rule 106 in such cases.

FORM A. *Fixed Meeting Points for Opposing Trains.*

- (1.) \_\_\_\_\_ will meet \_\_\_\_\_ at \_\_\_\_\_.  
 (2.) \_\_\_\_\_ will meet \_\_\_\_\_ at \_\_\_\_\_ \_\_\_\_\_  
 at \_\_\_\_\_ (and so on).

EXAMPLES.

(1) *No 1 will meet No 2 at Bombay.*

*No 3 will meet 2d No 4 at Siam.*

*No 5 will meet Extra 95 at Hong Kong.*

*Extra 652 North will meet Extra 231 South at Yokohama.*

(2) *No 1 will meet No 2 at Bombay 2d No 4 at Siam and Extra No 95 at Hong Kong.*

Trains receiving these orders will run with respect to each other to the designated points and there meet in the manner provided by the Rules.

NOTE.—The revised Code allows what may be termed a consecutive meeting order—that is, directing a train to meet a number of trains at different stations in the same order.

CHART NO. 7.

<p><i>Order No 1.</i>  <i>O &amp; E No 2 E.</i>  <i>O &amp; E No 1 A.</i>  <i>No 2 will meet No 1 at C</i></p> <p><i>Order No 2.</i>  <i>O &amp; E No 2 C.</i>  <i>O &amp; E No 1 B.</i>  <i>No 2 will meet No 1 at B</i></p>
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*Question Number 758. Should two orders be received, as shown in Chart No. 7, what would be the effect?*

ANSWER. It is a space movement. "Meet" means meet, and orders remain in effect until ful-

*Question Number 764. Under Chart No. 8, No. 2 could not proceed against No. 1 on an order giving right over all trains, on account of having a previous order, unfulfilled, to meet it, and because No. 2 had not arrived at the end of its run. Is the principle the same in Chart No. 9? Is Extra 455 West held at C for No. 2 after receiving Order No. 2?*

ANSWER. The principle is not the same. No. 2 in the former case could not disregard the order to meet because it was in effect. When Extra 455 West arrives at C it has reached the end of its run and all orders held by it or by other trains relating to it then become void. Order No. 2 creates a new train, giving it right over all trains. This new train is not required to respect, or be governed by, orders received on the former trip. It is then starting out on another trip—notwithstanding it apparently has a continuous movement in the same directions—and must have and be governed only by the new orders.

*Question Number 765. Does this demonstrate that when No. 1 received the "right" order in Chart No. 8, it should for the sake of safety respect it?*

ANSWER. Yes, and it illustrates the necessity for respecting all orders that are still in effect. Chart No. 8 shows what might happen if men were allowed to select only such orders as permit them to proceed. If No. 2 were to disregard Order No. 2 in Chart No. 9, there would be nothing to prevent a collision, as the new extra is governed only by Order No. 2.

## CHART NO. 10.

*Order No 1.*  
*No 16 Eng 452 will meet*  
*No 15 Eng 455 at D.*

*Order No 2.*  
*No 16 has Eng 430 instead*  
*of Eng 452.*

*Question Number 766. Under Order No. 1, Chart No. 10, what is required of No. 16, should D be a station at which there was no telegraph office?*

ANSWER. It must stop and deliver a train registering ticket to No. 15 and explain why they have not the engine designated in the order, if another engine has been substituted. Some train may have exchanged with No. 16 as allowed under Rule 94.

*Question Number 767. Is No. 15 to wait until the correct engine-number can be obtained by train order?*

ANSWER. The engine-number was added merely to identify No. 16. When No. 15 knows that No. 16 has been met it may proceed.

*Question Number 768. If D is a telegraph office, how should the error be corrected?*

ANSWER. As shown by Order No. 2. The dispatcher may have been given the wrong engine-number.

## CHART NO. 11.

*Order No 1.*  
*C & E No 2 E.*  
*C & E No 1 A.*  
*No 2 will meet No 1 at C.*

*Order No 2.*  
*C & E No 1 B.*  
*C & E No 2 C.*  
*No 1 will wait at B until*  
*4 p m for No 2.*



*Question Number 769. If No. 2 arrives at C at 3.45 p. m., and can make B by 4 p. m., may it go there for No. 1?*

ANSWER. Unless Order No. 1, Chart No. 11, is superseded or annulled, No. 2 must remain at C until No. 1 arrives.

*Question Number 770. In what way is No. 1 affected by Order No. 2?*

ANSWER. No. 1 must fulfill both orders, wait at B until 4 p. m., and then proceed to the meeting point.

*Question Number 771. Should both trains misunderstand and No. 2 start for B, knowing that they could get there and clear by 4 p. m., and No. 1 leave B before 4 p. m., who would be responsible in event of an accident?*

ANSWER. Both crews, for failing to respect the orders which were in effect. The dispatcher would also be held responsible for issuing improper orders.

#### CHART NO. 12.

<p>Order No 1.            O &amp; E No 2 E.            O &amp; E No 1 A.            No 2 will wait at C until            4 p. m. for No 1.</p>
<p>Order No 2.            O &amp; E No 1 A.            O &amp; E No 2 C.            No 2 will meet No 1 at B.</p>

*Question Number 772. No. 2 arrives at C at 3.40 p. m., and receives Order No. 2, Chart No. 12; may it proceed at once to B?*

ANSWER. No; it has an order to wait at C until

4 p. m., which has not been superseded and cannot be fulfilled until 4 p. m.

*Question Number 773. Under both orders, what must No. 1 understand?*

ANSWER. That it must meet No. 2 at B.

*Question Number 774. If a meeting point is fixed at the end of double track, in what way is the train which is going on to the double track affected?*

ANSWER. The train going on to the double track must wait at the meeting point until the other train arrives.

*Question Number 775. Is the "meeting" form of order the proper one for such movements?*

ANSWER. Not unless it is intended that the trains shall meet there. The form conferring "right" should be used when it is desired to only help trains to the end of double track against trains going from double to single track.

*Question Number 776. May the dispatcher fix a meeting point at the end of double track and in another order authorize the inferior train to run against the current of traffic, depending upon the meeting order alone to hold the ruling train at the designated place of meeting?*

ANSWER. That would be running unnecessary risk and probably cause misunderstanding as to where the superior train should wait for the inferior train to take the siding. The superior train must be advised that the inferior train is moving against the current of traffic in the manner and under the forms prescribed by the rules for double track.

## CHART NO. 13.

*Order No 1.*  
*No 2 will meet 1st and 2d No 1 at C.*

*Order No 2.*  
*No 2 will meet 1st No 1 at B instead of C.*

*Order No 3.*  
*Order No 1 is annulled.*

*Order No. 4.*  
*No 2 will meet 1st No 1 at D and 3d No 1 at C.*

*Question Number 777. Under Orders No. 1 and No. 2, Chart No. 13 (which are, of course, improper), may No. 2 leave C against 2d No. 1 on the supposition that it is safe to do so as 2d No. 1 cannot pass 1st No. 1 at B to meet No. 2 at C?*

ANSWER. No. No. 2 must not leave C against a train which they are directed to meet there.

*Question Number 778. May 1st No. 1, when overtaken at B by 2d No. 1, arrange with it and proceed to C under protection of the orders held by 2d No. 1?*

ANSWER. No. 1st No. 1 has no right to leave B against a train which it has been instructed to meet there. No. 2 is held at C and 2d No. 1 at B. There is always a chance for either opposing train to misunderstand such orders and proceed. 2d No. 1 must not pass 1st No. 1 and go to C for No. 2.

*Question Number 779. After Order No. 3 is issued, what must be understood?*

ANSWER. No. 2 then meets 1st No. 1 at B, and 2d No. 1 must clear No. 2's time-table time.

*Question Number 780. Under Order No. 4, what must be understood by No. 2 with regard to 2d No. 1?*

ANSWER. No. 2, being the train of superior direction, may disregard 2d No. 1; as it is not ordered to wait for it.

*Question Number 781. Should 3d No. 1 overtake 2d No. 1 at B, may 2d No. 1 proceed to C to meet No. 2 without protecting itself after having been shown Order No. 4?*

ANSWER. Order No. 4 is not sufficient authority for 2d No. 1 to go to C against No. 2, though an accident could not result if it were to do so, provided there is no telegraph station between B and C or at B; but should there be one, it would then be possible for the dispatcher to change the meeting point with No. 2 and 3d No. 1. This must be taken into consideration and a full understanding must be had between 2d and 3d No. 1. No. 2 must not pass C until 3d No. 1 arrives, even though 2d No. 1 is overdue but has not arrived; and 3d No. 1 must not pass and run as 3d No. 1 ahead of 2d No. 1.

#### CHART NO. 14.

<p><i>Order No 1.</i> No 2 will meet No 1 at B.</p> <p><i>Order No 2.</i> No 2 will meet No 1 at A instead of B.</p> <p><i>Order No 3.</i> C &amp; E No 1 A. C &amp; E No 2 B. Order No 2 is annulled.</p>
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*Question Number 782. Under the three orders in Chart No. 14, where do No. 1 and No. 2 meet?*

ANSWER. The entire movement is annulled. Order No. 2 supersedes Order No. 1 and Order No. 3 annuls Order No. 2. Orders superseded or annulled must be treated as though they had never been issued. No. 2, being superior, proceeds, and No. 1, the inferior train, must clear No. 2's timetable time.

NOTE.—Examiners should invariably use this chart. Although the case is a simple one, a great many dispatchers, trainmen and enginemen are under the impression that when Order No. 2 is annulled, the trains again revert to Order No. 1 and meet at B. The danger lies in the inferior train so misunderstanding.

CHART NO. 15.

*Order No 1.*  
*No 2 will meet No 1 at C.*

*Order No 2.*  
*No 2 will meet No 1 at B*  
*instead of C.*

*Order No 3.*  
*No 2 will meet No 1 at C*  
*instead of B.*

*Question Number 783. Under the three orders in Chart No. 15, where do No. 1 and No. 2 meet?*

ANSWER. They meet at C.

*Question Number 784. If necessary, may the dispatcher issue further orders changing the meeting point?*

ANSWER. Yes, but he must be careful to time them properly, allowing as much time as possible between the orders.

CHART NO. 16.

*Order No 1.*  
*Extra 455 West will meet Extra*  
*452 East at C.*

*Order No 2.*  
*Extra 455 West will meet Extra*  
*452 East at D instead of C.*

*Order No 3.*  
*Order No 2 is annulled.*

*Question Number 785. Under Orders No. 1, No. 2 and No. 3, Chart No. 16, where do the extras meet.*

ANSWER. There are no train orders in effect fixing a meeting point between them.

CHART NO. 17.

*Order No 1.*  
*No 2 will meet No 1 at C.*

*Order No 3.*  
*No 2 will meet No 1 at A*  
*instead of B.*

*Question Number 786. Under Orders No. 1 and No. 3, Chart No. 17, may No. 2 leave C before the arrival of No. 1?*

ANSWER. No; the order for No. 2 to meet No. 1 at that station has not been superseded.

*Question Number 787. When No. 1 receives Order No. 3, is it to wait at A for No. 2?*

ANSWER. Yes, for three reasons: (1) No. 1 has received an order to meet No. 2 there; (2) There may be stations of similar names and the men on No. 2, not reading Order No. 3 carefully, might

think it meant "instead of C"; (3) There may have been an order issued for No. 2 to meet No. 1 at B, - instead of C, which failed to be delivered.

## CHART NO. 18.

<p><i>Order No 1.</i>  <i>C &amp; E No 2 E.</i>  <i>No 2 will meet 1st No 1 at</i>  <i>D, 2d No 1 at C and Extra</i>  <i>455 West at B.</i></p> <p><i>Order No 2.</i>  <i>C &amp; E No 2 D.</i>  <i>C &amp; E 2d No 1 B.</i>  <i>No 2 will meet 2d No 1 at D</i>  <i>instead of C.</i></p> <p><i>Order No 3.</i>  <i>C &amp; E 2d No 1 B.</i>  <i>C &amp; E No 2 D.</i>  <i>Order No 2 is annulled.</i></p>
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*Question Number 788. When a part of an order is superseded or annulled, what is the effect?*

ANSWER. The part of the order not superseded or annulled still continues in full force.

*Question Number 789. Under Orders No. 1, No. 2 and No. 3, Chart No. 18, what must No. 2 understand?*

ANSWER. That only one movement in Order No. 1 has been superseded and that the superseding order has been annulled, so that now it has no order to meet 2d No. 1, but must still meet 1st No. 1 at D and Extra 455 West at B.

*Question Number 790. What must be understood by 2d No. 1?*

ANSWER. After it receives Order No. 3 it must clear No. 2's time-table time. Their meeting order with No. 2 has been annulled,

## CHART NO. 19.

<p><i>Order No 1.</i>  <i>No 2 will take siding and meet No 1 at C.</i></p> <p><i>Order No 2.</i>  <i>No 2 will meet <u>No 1 at B</u> instead of C.</i></p> <p><i>Order No 3.</i>  <i>No 2 will take siding and meet Extra 455          West at C and Extra 480 West at B.</i></p>
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LECTURE. Chart No. 19 has provoked considerable discussion in railroad journals, and there seems to be wide difference of opinion as to the rights of trains under such orders. As such orders are sometimes issued so worded as to raise a doubt as to their exact intent, the safest ruling to make is one that will admit of no argument or misunderstanding. It is therefore ruled that unless the dispatcher specifically states in each order which train shall take the siding at each meeting point, that the train which is entitled to the main track under the rules must understand that it is to occupy the main track and the inferior train must take the siding. It is believed there is sufficient authority for this ruling. The "take-siding" provision is one that may be understood to apply locally and only at the station named in the order, and when the meeting point is changed, without anything being said in the superseding order as to which train shall take the siding, all provisions relating to the former meeting point are also superseded. When practicable it would, of course, be better to annul the "take-siding" order when the meeting point is changed. It is the duty of train dispatchers to make the matter so clear that there simply cannot be a misunderstanding.



*Question Number 791. Under Orders No. 1 and No. 2, Chart No. 19, which train must take the siding at B?*

ANSWER. The train which is inferior by rule. In this example, No. 1.

*Question Number 792. Under Order No. 3, which train should take siding at B?*

ANSWER. Extra 420 West.

*Question Number 793. Is Order No. 3 in proper form, or can it be made clearer?*

ANSWER. Any order which will create doubt or admit of argument is not a proper order. The movements may be authorized by two orders; or, the order may read, "No. 2 will take siding and meet Extra 455 West at C, and hold main track and meet Extra 420 West at B"; or, Extra 420 may be directed to take siding at B.

*Question Number 794. Is there objection to an order reading, "No. 2 will meet Extra 455 West at C and Extra 420 West at B. No. 2 will take siding at C"?*

ANSWER. The order is clear. The only objection that may be raised is that the instruction to take the siding does not appear in the proper place in the order.

*Question Number 795. Is it proper for the dispatcher to reverse the superiority of trains at meeting points by directing the inferior trains to hold the main track?*

ANSWER. It is not proper to do so, except in cases of necessity or for other good reasons.

## CHART NO. 20.

*Order No 1.*

*No 2 will meet No 1 at D, No 3 at C and No 5 at B.  
No 2 will take siding at all meeting points.*

*Order No 2.*

*No 2 will meet No 5 at A instead of B.*

*Question Number 796. Under Orders No. 1 and No. 2, Chart No. 20, which train takes siding at A?*

ANSWER. No. 5, since it is the inferior train in this example.

*Question Number 797. How should Order No. 1 have been worded?*

ANSWER. If it had read, "No. 2 will take siding at D, C and B," or if each meeting point had been preceded by instructions to take siding, there would then be no misunderstanding when any of such meeting points were changed.

## CHART NO. 21.

*Order No 1.*

*Eng 455 will run extra A to E, hold main track and meet Extra 452 East at B, Extra 450 East at C and Extra 430 East at D.*

*Question Number 798. Under Order No. 1, Chart No. 21, which trains should take siding at C and D?*

ANSWER. Extra 455 West, as it is of inferior direction in this case.

*Question Number 799. Should not the order have been worded differently, so that a misunderstanding could not arise?*

ANSWER. There is no authority for the expression "hold main track," but there can be no objection to it in cases of this kind; but the words should have been added in connection with each meeting point, not inserted once, expecting it to be understood that it applied to all thereafter.

*Question Number 800. May an order be issued reading, "No. 1 will hold main track and meet No. 2 at C," instead of one reading, "No. 2 will take siding and meet No. 1 at C"?*

ANSWER. Yes; it sometimes makes orders clearer to so word them.

CHART NO. 22.

*Order No 1.*

*Extra 452 East will meet Extra 455 West at C and Extra 430 West at B. Extra 452 East will take siding.*

*Order No 2.*

*No 16 will meet No 15 at D, No 13 at C and has right over No 1 E to A. No 16 will take siding.*

*Question Number 801. Under Order No. 1, Chart No. 22, at what stations must Extra 452 East take the siding?*

ANSWER. The order is not clear, and should not be issued in that form. Under it, Extra 452 must take siding at C and B, as would be expected by the opposing extras. But Extra 452 might understand that the order requires it to take siding only at the last-named station.

*Question Number 802. Under Order No. 2, what may be understood?*

ANSWER. The order will admit of various under-

standings, and should not be issued in that form. No. 1 may be misled and hold the main track at any point it can make by time-table for No. 16.

*Question Number 803. How should the order have been worded?*

ANSWER. No. 16 should have been ordered to take the siding at each meeting point, and, if practicable, the "right" over No. 1 should have been given by a separate order.

CHART NO. 23.

<p><i>Order No 1.</i> No 2 will meet No 1 at C.</p> <p><i>Order No 2.</i> No 2 will meet <u>1st No 1</u> at D instead of C.</p> <p><i>Order No 3.</i> No 2 will meet No 1 at C.</p> <p><i>Order No 4.</i> No 2 will meet <u>1st No 1</u> at B instead of C.</p> <p><i>Order No 5.</i> No 2 will meet No 1 at C.</p> <p><i>Order No 6.</i> No 2 will meet <u>4th No 1</u> at B instead of C.</p>
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*Question Number 804. Under Orders No. 1 and No. 2, Chart No. 23, what must be understood?*

ANSWER. No. 2 meets 1st No. 1 at D and the other four sections at C. (It being understood that there are five sections of No. 1 under all these examples.)

*Question Number 805. Under Orders No. 3 and No. 4, may No. 2 leave C, and, if so, how many sections of No. 1 must it wait for at B?*

ANSWER. Exception may properly be taken to

the way the orders are issued. Order No. 3 holds No. 2 at C for all sections of No. 1, and Order No. 4 helps only against the first section. If the order had read to meet 1st and 2d No. 1 at B, instead of C, No. 2 could proceed to B. If No. 2 accepts the order and proceeds to B, it must wait at B for all sections of No. 1, unless Order No. 3 is annulled without regard to the number of sections specified in Order No. 4.

*Question Number 806. Under Orders No. 5 and No. 6, what must be understood?*

ANSWER. Order No. 5 holds No. 2 at C for all sections of No. 1. Order No. 6 allows No. 2 to leave C upon the arrival of 3d No. 1, and holds it at B for the remaining sections of No. 1. Order No. 6 should direct No. 2 to meet 4th and 5th No. 1 at B, or elsewhere.

*Question Number 807. Is there not danger of No. 2 understanding that Order No. 6 fully supersedes Order No. 5 and so leaving B upon the arrival of 4th No. 1?*

ANSWER. Yes. When the dispatcher supersedes an order similar to No. 3 or No. 5, he must specify all sections which are to be met at other points, as, under Rule 218, all sections are included, and No. 2 is held for all.

*Question Number 808. Should No. 1 receive orders to meet Extra 452 East at B and No. 2 at C, and 1st No. 2 were to overtake Extra 452 and, to avoid delay, flag with it to B against No. 1, would there be anything in such case to prevent No. 1 from proceeding to C for 2d No. 2?*

ANSWER. No. 1 may then go to C for the remaining sections of No. 2.

*Question Number 809. If No. 1 were given orders to meet Extra 452 East at B and 1st No. 2 at C, and 1st No. 2 were to overtake Extra 452 at C and, to avoid delay, flag with it to B against No. 1, could No. 1 proceed to C against 2d No. 2?*

ANSWER. No.

CHART NO. 24.

<p><i>Order No 1.</i>  <i>No 2 will meet 1st, 2d and 3d No 1 at C.</i></p> <p><i>Order No 2.</i>  <i>No 2 will meet No 1 at B instead of C.</i></p>
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*Question Number 810. There are five sections of No. 1; under Orders No. 1 and No. 2, Chart No. 24, where does No. 2 meet all of them; and what principle governs in this case?*

ANSWER. Until Order No. 2 is received, No. 2 meets three sections at C; after Order No. 2 is received, it meets all sections at B. The principle governing under Charts No. 23 and 24 may be found in Rule 218. In the first order, Chart No. 24, three sections are specified and only that number is included in the movement. In Order No. 2 no sections are specified; therefore, all are to be met at B. No. 2 can leave C against all the sections which it received order, to meet there and is held at B for not only those three sections, but for all that may be following. If fourth and fifth No. 1 receive a copy of Order No. 2, they may go to B.

## CHART NO. 25.

<p><i>Order No 1.</i> No 2 will meet 1st and 2d No 1 at D.</p> <p><i>Order No 2.</i> C &amp; E 1st and 2d No 2 E. C &amp; E 1st No 1 A. 1st No 2 will meet 1st No 1 at C.</p> <p><i>Order No 3.</i> C &amp; E 1st and 2d No 2 E. 1st No 2 will run 1 hour late E to A.</p> <p><i>Order No 4.</i> C &amp; E 1st No 2 C. 1st No 2 will run 45 min late C to A instead of 1 hour late.</p>
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*Question Number 811. Chart No. 25, Order No. 1: No. 1 arrives at D without signals displayed for 2d No. 1; may No. 2 proceed?*

ANSWER. No. The order distinctly says 2d No. 1 must be met at D. The signals may have been broken off or blown out and engineman may also have failed to sound whistle signal calling attention to them.

*Question Number 812. If No. 15, an inferior-class train, receives an order to meet 1st No. 2 at D, and No. 2 arrives with no signals, may it proceed?*

ANSWER. No, for the reason that the signals on 1st No. 2 may have been lost on the way or the engineman may have failed to display them as directed.

*Question Number 813. What must trains do under such circumstances?*

ANSWER. They must stop the opposing train if necessary and get an explanation, or proceed under

protection of stop-signals if there be any doubt whatever.

*Question Number 814. In such cases, what is required of the dispatcher, if he annuls the second section before the meeting point is reached?*

ANSWER. He must furnish all interested trains a copy of the annulment order.

*Question Number 815. If an order were addressed to 1st and 2d No. 2, as shown by Order No. 2, fixing a meeting point between 1st No. 2 and 1st No. 1 at C, and upon the arrival of 2d No. 2 at C it be found that 1st No. 2 has departed and there are no orders awaiting 2d No. 2 indicating a different meeting point between 1st No. 2 and 1st No. 1, would 2d No. 2 be justified in proceeding?*

ANSWER. Yes.

*Question Number 816. Under Orders No. 3 and No. 4, how late must 2d No. 2 run. It will be noticed that Order No. 4 is not addressed to 2d No. 2?*

ANSWER. 2d No. 2 is not affected by the order. It must simply keep five minutes behind 1st No. 2. When the second section is following so closely, however, it would be better to address the order to both and instruct both to run late, thus, "1st and 2d No. 2 will run 1 hour late E to A."

*Question Number 817. Should the first section of No. 2 be on time and the second section be one hour late, and the dispatcher desire to run 2d No. 2 one hour late, must notice be given that the first section is on time, thus, "1st No. 2 is on time. 2d No. 2 will run 1 hour late E to A"?*



ANSWER. Some companies require such notice sent, though the rules do not. If so worded a misunderstanding would not likely arise. Men have been known to carelessly place their thumb over the section named in an order and read it "No 2 will run 1 hour late E to A," instead of "2d No 2 will run 1 hour late E to A."

*Question Number 818. Is it proper to address an order to 1st and 2d No. 2 fixing a meeting point between 1st No. 2 and 1st No. 1?*

ANSWER. Since it is known that both sections of No. 2 will quite likely meet 1st No. 1 at the same station, the order should read, "1st and 2d No. 2 will meet 1st No. 1 at C."

CHART NO. 26.

<p><i>Order No 1.</i>  <i>No 15 will meet 1st, 2d and 3d No 16</i>  <i>at B and Extra 452 East at C.</i></p>
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*Question Number 819. Under Order No. 1, Chart No. 26, should engine 452 arrive at B on 3d No. 16, may No. 15 disregard their meeting order with Extra 452 East at C, and if not, why?*

ANSWER. No; there are sometimes two engines of the same number when track is used jointly, or when power is rented from other companies; or a different head-light or another engine's tender may be in use.

*Question Number 820. When there is but one engine of that number on a road, would it be possible for engine 452 to be on 3d No. 16 and Extra 452 also be moving to C against No. 15?*

ANSWER. Yes; it may happen at any time. Extra 452 East may overtake 3d No. 16 disabled and exchange with it and pass it, as prescribed by Rule 94, and thereafter run as 3d No. 16, until an open telegraph office is reached. When able to proceed, the disabled train must run as Extra 452, although they may have engine No. 315, and must meet No. 15 at C. It will be seen that taking something for granted in this case might result seriously.

*Question Number 821. Should there be two engines (one from another road) of the same number running on a district, how should they be designated?*

ANSWER. Their road initials should be added to their number.

*Question Number 822. Under rules allowing a "19" order to be issued first to the operator and then to the trains that are to meet or wait at his station, if a superior train, after receiving such an order, should, at the meeting or waiting point, find an opposing train on the siding, the train-order signal at "proceed," and a hand-signal giving the same indication, would it have sufficient authority to proceed, or must it have positive knowledge that the opposing train is the one the order required it to meet or wait a certain length of time for?*

ANSWER. It must be positively known that the identical train to be met or waited for has arrived while the orders are in effect. It might have happened that the operator had failed to display his order signal as instructed, and the signal given might have been intended for some other train.

FORM B. *Directing a Train to Pass or Run Ahead of Another Train.*

- (1.) \_\_\_\_\_ will pass \_\_\_\_\_ at \_\_\_\_\_.  
 (2.) \_\_\_\_\_ will pass \_\_\_\_\_ when overtaken.  
 (3.) \_\_\_\_\_ will run ahead of \_\_\_\_\_ \_\_\_\_\_  
 to \_\_\_\_\_.  
 (4.) \_\_\_\_\_ will pass \_\_\_\_\_ at \_\_\_\_\_ and run  
 ahead of \_\_\_\_\_ \_\_\_\_\_ to \_\_\_\_\_.

EXAMPLES.

- (1) *No 1 will pass No 3 at Khartoum.*  
 (2) *No 6 will pass No 4 when overtaken.*  
 (3) *Extra 594 will run ahead of No 6 Bengal to Madras.*  
 (4) *No 1 will pass No 3 at Khartoum and run ahead of No 7 Madras to Bengal.*

When under (1) a train is to pass another, both trains will run according to rule to the designated point and there arrange for the rear train to pass promptly.

Under (2) both trains will run according to rule until the second-named train is overtaken, and then arrange for the rear train to pass promptly.

Under (3) the second-named train must not exceed the speed of the first-named train between the points designated.

CHART NO. 27.

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|---|
| <p>(A.) <i>No 1 will pass No 3 at C.</i><br/>         (B.) <i>No 15 will pass No 1 at C.</i><br/>         (C.) <i>Extra 455 West will pass Extra 452 West at C.</i><br/>         (D.) <i>Extra 455 West will pass No 15 at C.</i><br/>         (E.) <i>Preferred Extra 453 West will pass No 15 at C.</i><br/>         (F.) <i>Psgr Extra 323 West will pass No 1 at C.</i></p> |
|---|

*Question Number 823. Is an order to pass a superior train authority to also run ahead of it?*

ANSWER. No; the two movements must be separately mentioned, one an order to pass, and the other to run ahead; they may be combined in one order.

*Question Number 824. Under example (A), Chart No. 27, both trains are of the same class; must No. 1 also have an order to run ahead of No. 3?*

ANSWER. No.

*Question Number 825. Under (B), No. 15 is second-class and No. 1 first-class; may No. 15 proceed?*

ANSWER. Not without an order to run ahead.

*Question Number 826. When should example (C) be used?*

ANSWER. When it is desired to run one extra around another; the order may be issued before the extras reach the passing point, to avoid delaying the following extra.

*Question Number 827. Under (D), may Extra 455 West proceed?*

ANSWER. Not without an order to run ahead.

*Question Number 828. Under (E), may the "preferred" Extra proceed?*

ANSWER. Yes, under the provisions of Rule 93 (A), No. 15 being a second-class train.

*Question Number 829. Under (F), may the "passenger" Extra proceed?*

ANSWER. No. Rule 93 (A) gives no such right over first-class trains.

## CHART NO. 28.

(G.) No 1 will pass No 3 when overtaken.

(H.) No 15 will run ahead of No 1 until overtaken.

(I.) Extra 455 West will run ahead of No 1 A to C.

(J.) No 15 will pass No 13 at B and run ahead of No 1  
O to E.

(K.) No 15 will pass No 1 at C and run ahead to E.

*Question Number 830. Under (G), Chart No. 28, which train becomes inferior, and how must it arrange for passing?*

ANSWER. The train to be passed (No. 3) becomes inferior and must take the siding, or arrange the switchers so that the rear train (No. 1) may pass without delay.

*Question Number 831. If No. 3 be the inferior-class train, may the order be construed to mean that it may run ahead of No. 1 until overtaken?*

ANSWER. No.

*Question Number 832. Under (H), what must be understood, and is it in correct form?*

ANSWER. Immediately upon being overtaken at a station, No. 15 must allow No. 1 to pass. This form is not authorized by Code rules, but there can be no valid objection to its use.

*Question Number 833. What prescribed forms may be used to accomplish the same purpose?*

ANSWER. An order may be given reading, "No. 15 will run ahead of No. 1, A to E," and a second order issued reading, "No. 1 will pass No. 15 when overtaken."

*Question Number 834. Under (I), how must No. 1 run?*

ANSWER. By the rule No. 1 should not exceed the speed of the "extra"; and as extra trains have no prescribed speed, No. 1 must not exceed the speed that freight trains ordinarily make between the stations named.

*Question Number 835. If, under example (I), the "extra" were to leave with only a caboose, may that be taken into consideration by No. 1 in regulating its speed?*

ANSWER. No; the extra engine may get its full complement of cars at the next station.

*Question Number 836. If the "extra" stops or is delayed, must it be protected, although it holds an order to run ahead of No. 1?*

ANSWER. It must protect itself. A train is not relieved from protecting its rear under any kind of orders, except when given "right" over all trains.

*Question Number 837. Was this form intended to be used to make a first-class train a train of inferior right over an entire district?*

ANSWER. No; it should only be used to run one freight train ahead of another. As applied to first-class trains, it would be an emergency order, to be used only when there is a blockade or for other reasons when a time-order cannot be made to serve.

*Question Number 838. Under (J), what movement is intended?*

ANSWER. It authorizes No. 15 to pass No. 13, a train of the same class, and directs No. 15 to run ahead of a superior-class train from a junction.

*Question Number 839. Does No. 15 also require an order to pass No. 1 at the junction?*

ANSWER. Not unless No. 1 is there.

*Question Number 840. If already ahead of a superior train when the order to run ahead was issued, must it read to "pass and run ahead of"?*

ANSWER. No; such an order applies only when two movements are to be made—passing and running ahead. Should an inferior train fall back on the time of a superior train, it requires only an order that will allow it to proceed ahead of such superior train.

*Question Number 841. Under what circumstances would it be proper to issue an order directing an inferior-class train to pass a superior-class train, and not instructing the inferior train to also run ahead?*

ANSWER. When it is desired to have the inferior train pass and keep ahead as far as it can on a time-order. Under Code rules, the inferior-class train would require an order to pass in addition to the time-order which would allow it to proceed after getting by. It would not be difficult, however, to construe the time-order as authority to pass also.

*Question Number 842. Under (K), what meaning is intended to be conveyed?*

ANSWER. It is a form which may be used to authorize an inferior train to pass a superior train and run ahead of it. The order should be addressed to both trains before the passing point is reached, to enable the train ahead to take the siding where it is to be passed.

*Question Number 843. Under this order, may No. 1 pass No. 15 between C and E, without a train order to do so?*

ANSWER. No, except as prescribed by Rule 94.

*Question Number 844. What form of order may be used to authorize such passing?*

ANSWER. The order to run ahead may be annulled; or another may be issued directing No. 1 to pass; or the original order may read, "No. 15 will pass No. 1 at C and run ahead to E unless overtaken."

*Question Number 845. If an order were issued reading, "No. 1 will pass No. 15 at D," would this be sufficient; or must No. 1 receive an order to pass and run ahead of No. 15, on account of the previous order for No. 15 to run ahead of No. 1 making No. 1 inferior?*

ANSWER. An order to pass may be understood to be sufficient.

*Question Number 846. If No. 15 is delaying No. 1 at a blind siding, may No. 1 pass?*

ANSWER. There would be no serious result if No. 1 were to pass and report at the next open telegraph office. It would be carrying out the spirit, if not the letter, of Rule 94.

*Question Number 847. If No. 1 were to overtake No. 15 at a station waiting for its time, could it pass No. 15?*

ANSWER. There must have been good reason for running No. 15 ahead of No. 1, or such an order would not have been issued. The dispatcher may



therefore be depended upon to arrange to have No. 1 pass if he so desires.

**FORM C. GIVING A TRAIN THE RIGHT OVER AN OPPOSING TRAIN.**

——— has right over ——— ——— to ———.

**EXAMPLES.**

(1.) *No 1 has right over No 2 Mecca to Mirbat.*

(2.) *Extra 37 has right over No 3 Natal to Railam.*

This order gives the train first named the right over the other train between the points named.

If the trains meet at either of the designated points, the first-named train must take the siding, unless the order otherwise prescribes.

Under (1), if the second-named train reaches the point last named before the other arrives, it may proceed, keeping clear of the opposing train as many minutes as such train was before required to clear it under the Rules.

If the second-named train, before meeting, reaches a point within or beyond the limits named in the order, the conductor must stop the other train where it is met and inform it of his arrival.

Under (2) the regular train must not go beyond the point last named until the extra train has arrived.

When the extra train has reached the point last named, the order is fulfilled.

The following modification of this form of order will be applicable for giving a work extra the right over all trains in case of emergency:

(3.) Work extra ——— has right over all trains between ——— and ——— from ———m to ———m.

**EXAMPLE.**

*Work extra 275 has right over all trains between Stockholm and Edinburg from 7 p m to 12 midnight.*

This gives the work extra the exclusive right between the points designated between the times named.

*Question Number 848. When one train is given "right" over another, what effect does the order have upon the train over which right is given?*

ANSWER. It becomes the inferior train. A "right" order reverses the superiority of a train and requires it to clear the time-table time of the train which is given the right over it by as many minutes as such train was before required by rule to clear its superior train. It does not prevent any train from going to any station it can make and properly clear the time of the train having the right over it.

*Question Number 849. What form is used to give a work extra the right over all trains, or certain trains?*

ANSWER. It may be found in Example (3) of Form C.

CHART NO. 29.

<p><i>Order No 1.</i> <i>No 1 has right over No 2 A to E.</i></p> <p><i>Order No 2.</i> <i>No 1 will meet No 2 at C.</i></p> <p><i>Order No 3.</i> <i>Order No 2 is annulled.</i></p>
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*Question Number 850. Under Order No. 1, Chart No. 29, at what points are No. 1 and No. 2 entitled to the main track?*

ANSWER. No. 1 is entitled to the main track at all stations between A and E. After No. 2 is overdue at A and has failed to arrive, there would be no objection to No. 1's holding the main track at that station also, unless No. 2 has train orders

which may allow it to reach such point for No. 1. No. 2 is entitled to the main track at E, and also at A, provided it makes A for No. 1 by time-table or order.

*Question Number 851. If No. 1 is not due at E when No. 2 receives the order, may No. 2 proceed, and in what manner?*

ANSWER. No. 2 may go to any station which it can make and clear No. 1's time-table time, taking siding at such point. If it can make the first-named station, it holds the main track. If No. 2 receives an order that No. 1 is running late, it may use the additional time to move against No. 1, clearing No. 1's new time the same as if it were its regular time-table time.

*Question Number 852. Should a train over which right has been given stop the train which has thus been made superior to it where it is met, for the purpose of being identified by the superior train?*

ANSWER. If the train over which the right is given reaches a point within or beyond the limits named in the order, it must stop the train holding the "right" order over it and give notice of its arrival.

*Question Number 853. Why is this necessary?*

ANSWER. In the absence of such information, No. 1 would be held at the last-named station for No. 2. Or, should No. 1 get beyond the last-named station for No. 2, and fail to notify the latter of its arrival, No. 2 would also be unable to pass such point.

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*Question Number 854. If there are train registers at A and E, is it then necessary to notify the other train, except within the limits specified in the order?*

ANSWER. Not if the trains affected must stop at such points to check registers.

*Question Number 855. If engine numbers are designated in orders, must trains then notify?*

ANSWER. The notification must be just as positively made.

LECTURE. It is doubtful if No. 2 would ever get beyond the limits, but it might; if so, and it is on double track, it cannot be expected always to notify, as trains may meet between stations. If No. 1 moves against No. 2 outside of the limits, it must know that No. 2 has been met, as No. 1 is then inferior to No. 2. Technically the Code rule is correct, as No. 1 must know that No. 2 has been met, or take the siding at A and E. It is just as essential that No. 1 notify No. 2 beyond E, should No. 1 get beyond such limit on a time order, as otherwise No. 2 must wait indefinitely at E if there are no train registers. There should be train registers at points to which trains are given right, if there is a possibility of their meeting beyond such limits. It is nearly always possible for dispatchers to arrange train orders so that this shall be the case.

*Question Number 856. Until No. 2 is met, how must No. 1 approach stations between A and E?*

ANSWER. Prepared to stop, and observing Rule 90, as No. 2 was required to do before the superiority of the two trains was reversed.

*Question Number 857. Does Order No. 2 supersede Order No. 1? If not, how must the trains run with respect to each other?*

ANSWER. Both orders are in effect for both trains, and both must be fulfilled. No. 1 fulfils both orders by holding the main track at the meeting point and waiting indefinitely for No. 2. No. 2 fulfils both orders by going to such meeting point, taking the siding and waiting indefinitely for No. 1.

*Question Number 858. When Order No. 2 is annulled by Order No. 3, what must be understood?*

ANSWER. The trains are in the same position that they were before the meeting point was fixed. No. 1 proceeds on the "right" order, and, in the absence of any order to the contrary, No. 2 must clear No. 1's time-table time.

*Question Number 859. If the trains are running in sections, what must be understood?*

ANSWER. Unless particular sections are specified, all sections of No. 1 receiving the "right" order proceed against all sections of No. 2; and all sections of No. 2 are required to wait for all sections of No. 1.

CHART NO. 30.

*Order No 1.*

*No 15 has right over No 2 A to E.*

*Order No 2.*

*No 15 will meet No 2 at C, instead of having right over No 2 A to E.*

*Order No 3.*

*Order No 2 is annulled.*

*Order No 4.*

*Order No 1 is annulled. No 2 will meet No 15 at C.*

*Question Number 860. Under Order No. 1, Chart No. 30, what is required of No. 2, it being of superior class?*

ANSWER. It must proceed as previously described, except that it must clear No. 15's time-table time or "run-late" time five minutes, as No. 15 was required to clear No. 2's time five minutes before superiority was reversed.\*

*Question Number 861. Under Orders No. 1 and No. 2, what must both trains understand?*

ANSWER. That the Order No. 1 has been superseded. No. 2 meets No. 15 at C. No. 15 must take siding.

*Question Number 862. Under Orders No. 1, No. 2 and No. 3, what rights have the trains?*

ANSWER. Order No. 2 supersedes Order No. 1, and Order No. 3 annuls Order No. 2. No. 15 is required to clear No. 2's time-table time at least five minutes immediately upon receipt of Order No. 3; and No. 2 will proceed, disregarding No. 15. If No. 2 is due at the station where No. 15 receives Order No. 3, the order must not be acknowledged by No. 15 until it is clear of the main track.

*Question Number 863. Why is it necessary to issue Order No. 2? Should not Order No. 4 be used instead?*

ANSWER. Order No. 1 may direct several movements, all of which the dispatcher does not wish to annul; but if there is only one movement it should be annulled as shown by Order No. 4.

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\*See Question Number 848.

## CHART NO. 31.

<p><i>Order No 1.</i> <i>1st No 15 has right over</i> <i>1st No 2 A to E.</i></p>
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*Question Number 864. Under Order No. 1, Chart No. 31, if 1st No. 2 makes some station between A and E for 1st No. 15, is it especially important that it stop 1st No. 15 and notify it of the arrival of 1st No. 2, or can the engine number be depended upon to act as a notice, in case it be added in the "right" order?*

ANSWER. 1st No. 2 must stop 1st No. 15 and notify it, and not depend upon the engine number.

*Question Number 865. What complications may arise under an order of this kind?*

ANSWER. If 1st No. 2 passes beyond the last-named station, there is danger of 1st No. 15 proceeding against 2d No. 2. 1st No. 2 must take whatever siding it can make for 1st No. 15, but as 2d No. 2 will hold the main track it might run into 1st No. 15 at such station, or 1st No. 2 might head in on a branch track, curving away from the main track, in order to clear 1st No. 15, and so be obscured; and then 2d No. 2 might pass, run ahead and collide with 1st No. 15; or, if no signals were displayed by 2d No. 2, 1st No. 2 would be left unprotected.

*Question Number 866. Is 1st No. 2 required to wait for 2d No. 15?*

ANSWER. No, the sections are specified.

*Question Number 867. When 1st No. 15 meets 1st No. 2 within the limits mentioned, may it proceed?*

ANSWER. Not without orders against the second section.

*Question Number 868. Should the dispatcher issue an order of this kind?*

ANSWER. If the conditions are such that the section over which right is given can pass the last-named station, he must not then issue orders for following sections to run without safeguarding the trains as the exigency of the case demands.

CHART NO. 32.

<p><i>Order No 1.</i>  <i>No 15 has right over 1st No 16</i>  <i>A to C and over 2d No 16</i>  <i>C to E.</i></p> <p><i>Order No 2.</i>  <i>No 15 will meet 1st No 16 at B.</i></p>
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*Question Number 869. Under Orders No. 1 and No. 2, Chart No. 32, when 1st No. 16 is met at B, by order or otherwise, may No. 15 proceed against 2d No. 16?*

ANSWER. No; its "right" order against 2d No. 16 does not apply between B and C.

*Question Number 870. Under order No. 1 is it necessary for 1st No. 16 to stop No. 15 and notify it that the first section of No. 16 has arrived?*

ANSWER. Yes.



*Question Number 871. If 2d No. 16 makes C by rule for No. 15, may it safely proceed?*

ANSWER. According to the rules it may, being a train of superior direction; but it would be likely to collide with No. 15 at B.

*Question Number 872. May such an order be issued? If not, how should the movement be authorized?*

ANSWER. An order of this kind must not be given. No. 15 should have been given the right over No. 16 from A to E, or over both sections from A to E.

#### CHART NO. 33.

<p><i>Order No 1.</i> <i>No 1 has right over No 2 A to E.</i></p> <p><i>Order No 2.</i> <i>No 2 has right over No 1 E to A.</i></p>
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*Question Number 873. The dispatcher desiring to render Order No. 1, Chart No. 33, void, issued Order No. 2 to accomplish the purpose. What effect have the orders upon each other, and are the trains then in the same position as before the orders were issued?*

ANSWER. Both orders are in effect. No. 1 could go to any point it can make for No. 2 by time-table, and must there take the siding. No. 2 could proceed in the same manner. The second order is not proper. The first order should have been annulled, and then both trains would run as per rule.

CHART NO. 34.

*Order No 1.*  
*Extra 455 West has right over Extra 452 East A to E.*

*Order No 2.*  
*Extra 455 West will meet Extra 452 East at C.*

*Order No 3.*  
*C & E Ex 452 East D.*  
*Order No 2 is annulled.*

*Question Number 874. Under Orders No. 1, No. 2 and No. 3, Chart No. 34, where do the extras meet?*

ANSWER. Order No. 1 thus remaining in effect, Extra 455 West may proceed as soon as Order No. 2 is annulled. Extra 452 East must understand that it is to meet Extra 455 West wherever it receives the notice of annulment of Order No. 2.

*Question Number 875. When should Extra 452 East acknowledge Order No. 3?*

ANSWER. Not until it has cleared the main track or has been properly protected against Extra 455 West.

CHART NO. 35.

*Order No 1.*  
*No 2 will meet 1st No 1 at D.*

*Order No 2.*  
*2d No 1 has right over No 2 A to E.*

*Question Number 876. Under Orders No. 1 and No. 2, Chart No. 35, what must No. 2 understand, No. 1 being overdue when the order is delivered to No. 2 at E?*

ANSWER. That No. 2 must not leave E.

*Question Number 877. What must 1st and 2d No. 1 understand?*

ANSWER. That 2d No. 1 must not pass the first section; both must wait at D.

*Question Number 878. Cannot one of the trains move? As it is clear that 1st No. 1 must not leave D, why may not No. 2 disregard Order No. 2 until 1st No. 1 is met?*

ANSWER. Because 1st and 2d No. 1 may also reason that as No. 2 is held at E for 2d No. 1, therefore both sections of No. 1 may proceed against No. 2, under protection of Order No. 2.

CHART NO. 36.

*Order No 1.*

*Extra 452 East has right over No. 1 E to C.*

*Order No 2.*

*Extra 452 East will wait at D until 4 p m for No 1.*

*Order No 3.*

*Work extra 292 has right over all trains between D and C from 7 a m until 12 30 p m.*

*Question Number 879. Under Order No. 1, Chart No. 36, may No. 1 pass C before Extra 452 East arrives there?*

ANSWER. Not without further orders against such extra.

*Question Number 880. Under Orders No. 1 and No. 2, or if the extra were run on a schedule, could No. 1 leave C if it could make some station and clear the "wait" or "schedule" time, and how many minutes must the extra be cleared?*

ANSWER. No. 1 may go as far as D on the "wait" order, or may go to any station it can make

on the extra's schedule, and must take siding at such point, clearing the "wait" or "schedule" time at least five minutes.

*Question Number 881. It has been stated that one order never supersedes another unless the words "instead of" be added; how can No. 1 leave C on Order No. 2?*

ANSWER. Both orders are in effect; the second properly qualifies the first. The extra has right, but waits until certain times at stations. No. 1 may proceed if it can clear those times.

*Question Number 882. If No. 1 leaves C against the extra, must it stop the extra wherever met and notify it that No. 1 has arrived?*

ANSWER. Yes; otherwise the extra would take siding at C, and in the absence of other means of identification would be held until No. 1 lost class.

*Question Number 883. When the extra reaches C, is the order fulfilled?*

ANSWER. The Code rules so state, but that paragraph should be omitted, as it is unnecessary and misleading. It would not be well to have the operator so understand, if he held an order for No. 1 giving the extra right to that point. Again, if the extra gets beyond C for No. 1 on a time order, or something of that nature, it must stop No. 1 for identification, unless there is a train register at C. Therefore it will be seen that it is not always best to treat the order as fulfilled when the extra arrives at C.

*Question Number 884. Under Order No. 3, if*

*an extra west were to arrive at C at 11.30 a. m. and find the work extra there, could such train proceed?*

ANSWER. Certain things are to be considered before entering the working limits. Work extras do not always display markers on the last car of their train; they sometimes leave cars on the main track, under an order of this kind, and run for water or other supplies, or there may be a wreck or an unsafe bridge. The extra west must ascertain if the entire work train is at C; then, if the track is not obstructed within their working limits, the extra train may proceed, using due care between C and D.

*Question Number 885. While within the work extra's limits, what must be guarded against?*

ANSWER. An extra train must not allow a work extra to pass it on some siding and then follow it, as the work extra's orders would permit it to run against the following extra train.

*Question 886. May an order be issued for a train to work "until track is clear"?*

ANSWER. It would be better to specify a time-limit, even though too much time is given; otherwise, after the track is clear, the work extra might think it has no right to go to a telegraph station within the work limits for further orders. If such an order is given, the work extra must be careful to get "in to clear" before advising that the track is clear or will be clear at a certain hour; it must not send the dispatcher word that the track is clear and then go to a station to get out of the way without protecting itself.

*Question Number 887. May an order be issued reading, "No. 1 has right over No. 2 to C"?*

ANSWER. No; both stations between which "right" is given must be stated.

*Question Number 888. May an order be issued reading, "No. 1 has right over No. 2 A to C and at C"?*

ANSWER. Yes, if delivered to No. 2 before it reaches C. If No. 2 is on the siding at C, the conductor's acknowledgment must be obtained before the order is completed for No. 1.

*Question Number 889. May an order be issued reading, "Engs 70 and 85 will run as 1st and 2d No. 1 A to E and have right over No. 2 A to C"?*

ANSWER. Yes.

*Question Number 890. May an order be issued reading, "Eng 90 will run extra A to E with right over No. 16"?*

ANSWER. Yes.

*Question Number 891. May an order be issued reading, "Eng 85 will run extra A to E with right over No. 16 to C"?*

ANSWER. Yes. The limits are all clearly defined in the above examples.

**FORM D. GIVING REGULAR TRAINS THE RIGHT OVER A GIVEN TRAIN.**

Regular trains have right over \_\_\_\_\_ between \_\_\_\_\_ and \_\_\_\_\_.

**EXAMPLE.**

*Regular trains have right over No 1 between Moscow and Berlin.*

This order gives to regular trains receiving it the right over the train named in the order, and the latter must clear the schedule times of all regular trains, as if it were an extra.

CHART NO. 37.

*Order No 1.*  
*Regular trains have right over No 1 between A and E.*

*Question Number 892. How much must No. 1 clear all regular trains under Order No. 1, Chart No. 37?*

ANSWER. Five minutes.

*Question Number 893. In checking train registers before starting, if it be found that No. 15, an inferior-class train moving in the same direction, has not gone, must No. 1 clear it or receive orders to run ahead of it?*

ANSWER. No. 1 must clear regular train No. 15 or get orders to precede it.

*Question Number 894. No. 1 can make B for No. 2, a train of the same class, and C for No. 16, an inferior-class train; how many minutes must these trains be cleared?*

ANSWER. No. 1 must clear all classes of trains five minutes.

LECTURE. Ordinarily, under "right" orders, trains must clear by as much time as they were previously required to clear by rule before such orders were issued; but under a blanket order, as above, the train over which right is given must clear all regular trains at least five minutes,

## FORM E. TIME ORDERS.

- (1.) \_\_\_\_\_ will run \_\_\_\_\_ late \_\_\_\_\_ to \_\_\_\_\_.
- (2.) \_\_\_\_\_ will run \_\_\_\_\_ late \_\_\_\_\_ to \_\_\_\_\_  
and \_\_\_\_\_ late \_\_\_\_\_ to \_\_\_\_\_, etc.
- (3.) \_\_\_\_\_ will wait at \_\_\_\_\_ until \_\_\_\_\_  
for \_\_\_\_\_.
- (4.) No — will run on the following schedule:  
Leave \_\_\_\_\_.  
“ \_\_\_\_\_.  
Arrive \_\_\_\_\_.

## EXAMPLES.

- (1). *No 1 will run 20 min late Joppa to Mainz.*
- (2). *No 1 will run 20 min late Joppa to Mainz and 15 min late Mainz to Muscat, etc.*
- (3). *No 1 will wait at Muscat until 10 a m for No 2.*

(1) and (2) make the schedule time of the train named, between the stations mentioned, as much later as stated in the order, and any other train receiving the order is required to run with respect to this later time, as before required to run with respect to the regular schedule time. The time in the order should be such as can be easily added to the schedule time.

Under (3) the train first named must not pass the designated station before the time given, unless the other train has arrived. The train last named is required to run with respect to the time specified, as before required to run with respect to the regular schedule time of the train first named.

- (4.) *No 1 will run on the following schedule:*

*Leave Turin 11 30 p m*

*“ Pekin 12 25 a m*

*“ Canton 1 47 a m*

*Arrive Rome 2 22 a m*

Example 4 makes the schedule time of the train named, between the stations mentioned, as much later as stated in the order, and any other train receiving the order is required to run with respect to this later



time, as before required to run with respect to the regular schedule time.

LECTURE. In determining whether or not a train has right conferred upon it by time orders, too much thought is sometimes given to the possible behavior of the train itself. If at D an inferior opposing train receives one hour of No. 1's time between A and C, account is often taken of what No. 1 can or cannot do between A and C, instead of considering whether No. 1 is or is not made inferior from C to the point where the train which is given one hour of No. 1's time receives the order. Let it be kept in mind that No. 1 is *not* made inferior from C; that the dispatcher has a perfect right to start a section of No. 1, or another No. 1, from C before No. 1 arrives. It must not be thought that if No. 1 is running thirty minutes late from A to C that an opposing inferior train may go to C if it can make that point against No. 1 by the time No. 1 is thirty minutes late leaving B, for the reason that No. 1 is not restricted as to its rights in leaving C, and a first section could be started from that station on time; or No. 1 may have thirty minutes dead time at C and arrive there in season to leave on time. No. 1 is not required to wait at C until it is thirty minutes late leaving that point when instructed to run thirty minutes late A to C; the order is fulfilled upon its arrival at C. The effect of a "run-late" order is to simply change a train's time-table time to a later time between the stations mentioned, and such later time must be cleared between those points by as many minutes as the train given the right to use the additional time was previously required to clear the other train's time-table time.

Another erroneous impression must be guarded against; for example, if an order is received giving a train until a certain time to make a station for a superior train in the opposite direction, the men on the inferior train might think they could use up the time to the last minute, instead of clearing such waiting train by as many minutes as they are by rule required to clear the train's time-table time. It must be understood that such orders are, in effect, a change of the opposing train's time-table time at the waiting points, and such time must be cleared by as many minutes as the rules require. Dispatchers can prevent trains from violating such time clearance, in many cases, by allowing ample time for the movement, or by not issuing such orders when they fear that trains may not be able to reach the waiting point in time to properly clear.

The "late schedule" order for regular trains (Example 4) is not authorized by Standard Code rules. For some reason the Train Rule Committee has never proposed a form for this movement. Little can be urged against it, and much said in its favor. After a dispatcher has worked a district a few weeks he can usually tell, within a few minutes, what time every engine can make, and can arrange a schedule that will allow a train to recover time when late, and by running them on such schedule, freight trains are handled safely on a much closer margin than would be possible if the first-class train were run late and a few minutes cut out at each station, which is necessary to allow such train to recover time, but is a dead loss, as inferior trains cannot take advantage of it. Then a "late schedule" order would seem to be simple

and safer, for when a train is to be run, say, 2 hours and 45 minutes late A to C, 2 hours and 35 minutes late C to E, and so on, the conductor and engine-man must add this time to their time-table time at stations before they are able to determine when they may pass a station; while, under the schedule order, it is all conveniently arranged by the dispatcher, and all that the train receiving such an order is required to guard against is not to pass any station in advance of the time named in the "late schedule" order.

## CHART NO. 38.

<p><i>Order No 1.</i>  <i>No 2 will run 30 min late E to A.</i></p>
<p><i>Order No 2.</i>  <i>No 2 will run 30 min late E to C.</i></p>
<p><i>Order No 3.</i>  <i>No 2 will run 30 min late E to C and  10 min late C to A.</i></p>

*Question Number 895. Under Order No. 1, Chart No. 38, how late must No. 2 run?*

ANSWER. Thirty minutes.

*Question Number 896. No. 1 and No. 15 both receive the order; how much of the time may they use?*

ANSWER. No. 1 may use all of it. No. 15 must clear the new time five minutes.

*Question Number 897. No. 15 receives Order No. 2 at A, and No. 16 receives it at E; how much time has each train to make C?*

ANSWER. No. 15 must clear No. 2's time-table leaving time at C. No. 16 must be in to clear at C

when No. 2 is twenty-five minutes late on its arriving time at C.

*Question Number 898. How must No. 2 run?*

ANSWER. It must pass all stations, except C, thirty minutes late.

*Question Number 899. May No. 2 arrive at C less than thirty minutes late?*

ANSWER. Code rules do not absolutely prohibit No. 2 from arriving at C less than thirty minutes late, unless it has an arriving and leaving time there, and trains receiving the right to use the additional time must not understand that No. 2 cannot do so. It would be possible for No. 2 to drift in to C less than thirty minutes late, but in that case it must take into consideration that other trains are required to clear it only as they are by rule required to clear No. 2's time-table time. If No. 2 has an arriving and leaving time given at C, it must arrive thirty minutes late. Under the second paragraph of Rule 92, which is unauthorized by the Standard Code. No. 2 must not arrive at C less than twenty-five minutes late if only a *leaving* time is given in its schedule. If it has an arriving and leaving time, it must not arrive less than thirty minutes late.

*Question Number 900. Must No. 2 wait at C until it is thirty minutes late on its leaving time, if not ordered to run the full thirty minutes late beyond such station?*

ANSWER. No; and if the time-table gives it thirty minutes waiting time at C, it could arrive

thirty minutes late and leave on time if its rights are not also restricted from C.

*Question Number 901. If No. 2 were ordered to run late only between E and C, could the dispatcher start a section of such train from C on time?*

ANSWER. Yes. Trains between A and C must keep in mind that this may be done; they have received no right over the train between A and C, and must clear its time-table time between those points.

*Question Number 902. Under Order No. 3, what must be understood by No. 15 and No. 16?*

ANSWER. That they have twenty-five minutes additional time to make stations between E and C, and five minutes between C and A, after allowing the clearance which the rules prescribe.

CHART NO. 39.

<p><i>Order No 1.</i> No 1 will run 1 hour late A to C.</p> <p><i>Order No 2.</i> No 1 will run <u>45 min</u> late A to E</p> <p><i>Order No 3.</i> No 1 will run 1 hour late A to E.</p> <p><i>Order No 4.</i> No 1 will run <u>2 hours</u> late A to E.</p> <p><i>Order No 5.</i> No 1 will run 2 hours late A to E.</p> <p><i>Order No 6.</i> No 1 will run 1 hour and 40 min late A to E instead of 2 hours late.</p> <p><i>Order No 7.</i> Order No 6 is annulled.</p>
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*Question Number 903. Under Orders No. 1 and No. 2, Chart No. 39, how much late must No. 1 run from A to E?*

ANSWER. One hour late A to C, and forty-five minutes late C to E.

*Question Number 904. If both orders were received by another train, how would they be understood?*

ANSWER. If given forty-five minutes A to E, then one hour A to C, there would be nothing unusual about it; but if given one hour first, then forty-five minutes, it might be inferred that there was some mistake, and it would be better to ask the dispatcher for an understanding or be governed by Order No. 2.

*Question Number 905. Under Orders No. 3 and No. 4, what should No. 1 and trains receiving the additional time understand?*

ANSWER. That No. 1 must run two hours late and other trains may be governed accordingly.

*Question Number 906. The rules require that all orders be fulfilled; how can No. 1 fulfil these orders?*

ANSWER. By running one hour late A to C, and forty-five minutes late C to E, Orders No. 1 and No. 2 will be fulfilled. By running two hours late A to E, all four orders will be fulfilled.

*Question Number 907. Is it necessary to annul Order No. 3 to make Order No. 4 effective?*

ANSWER. No.

*Question Number 908. Under Orders No. 5, No. 6 and No. 7, what must be understood by No. 1 and other trains to which the orders were issued?*

ANSWER. That Order No. 6, having superseded No. 5; and No. 7 having annulled No. 6, train No. 1 may run on time, and all trains receiving the three orders must so understand.

*Question Number 909. Operators have been known to destroy an order addressed to a train instructing it to run, say one hour late, when a later order was issued for such train at the same station to run one hour and 15 minutes late, within the same limits; is the practice unsafe?*

ANSWER. Yes. Such orders should not be destroyed, or any others addressed to a train. If the dispatcher were to annul the order to run one hour and 15 minutes late, understanding that the operator would then deliver the former order to run one hour late, and the operator were to understand that such order had been made void by the later order, and so clear the train, a collision might easily result, if the train thus failing to receive its time order were to recover its time and run less than one hour late.

*Question Number 910. May the dispatcher address an order to "all concerned," running a train, say one hour late, and afterward run such train less than one hour late?*

ANSWER. As an order addressed to "all concerned" is likely to be acted on by any one who gets possession of a copy, to supersede such an order would be unsafe, unless it is known that all trains that can possibly have received a copy are given the superseding order, before the train which is directed to run one hour late is permitted to run less than one hour late.

NOTE.—The examiner should hand the person under examination the current time-table and question him as to the time his train may pass stations under orders to run a certain number of hours and minutes late, shortening the time five or ten minutes every few stations, as such orders often provide; also, question as to when inferior trains receiving such additional time must clear at stations.

*Question Number 911. If a train is directed not to exceed a speed of four, six, ten, fifteen, twenty or thirty miles an hour, A to E, how many minutes must it use in each case between A and B? Between B and D? Between D and E? It is five miles from A to B; eight miles from B to D, and six and one-half miles from D to E.*

NOTE.—Superintendents, trackmen and bridgemen, in issuing "slow orders," should prescribe a speed of four, six, ten, fifteen, twenty or thirty miles an hour, as it is then easy to compute the time.

## CHART NO. 40.

*Order No 1.  
1st and 2d No 1 will run 2 hours late A to E.*

*Question Number 912. No. 16 receives Order No. 1, Chart No. 40, and takes siding at a blind siding for 1st No. 1. No. 1 passes with no signals; may No. 16 proceed?*

ANSWER. No. 16 must *know* that there is no second section of No. 1 before proceeding.

*Question Number 913. If signals were ordered to be taken down before such blind siding is reached, what must the dispatcher do?*

ANSWER. He should advise No. 16, which may



be done by sending it a copy of the order annulling the second section of No. 1.

*Question Number 914. Should dispatchers retard first-class trains when but a few minutes behind their schedule time, in order to move unimportant freight trains?*

ANSWER. He should allow first-class trains to recover their time. While he is helping one or two freights, he may be delaying several others which must clear the time-table time of the first-class train five minutes.

CHART NO. 41.

<p><i>Order No 1.</i>  <i>No 2 will wait at C until 10 a m for No 1 No 15 and Extra 455 West.</i></p> <hr style="width: 20%; margin: 10px auto;"/> <p><i>Order No 2.</i>  <i>No 16 will wait at C until 10 a m for No 15 and Extra 455 West.</i></p>
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*Question Number 915. Under Order No. 1, Chart No. 41, when must the trains which No. 2 is directed to wait for at C be "in to clear" at that point?*

ANSWER. They must clear the waiting train's time limit by as many minutes as required by rule to clear No. 2's time-table time—No. 1, by 10 a. m.; No. 15 and the extra, by 9 55 a. m.

*Question Number 916. If unable to make C by 10 a. m. and properly clear, what may the other trains do?*

ANSWER. They may go to any station that they can make between A and C by the time named, or

by the time No. 2 is due at such station by the time-table, clearing as required by the rule.

*Question Number 917. No. 1 reaches C by 9.35 a. m. and finds that it can make D by the time No. 2 is due to leave D by time-table; may it go there?*

ANSWER. Yes.

*Question Number 918. Must No. 1 stop No. 2 at D and notify it that train No. 1 has reached that station?*

ANSWER. If No. 2 reaches C before 10 a. m. it will have to wait until that time, unless advised of the arrival of trains it is directed to wait for.

*Question Number 919. Is there any objection to giving No. 2 an order to wait at several stations, at different times, for these trains?*

ANSWER. No.

*Question Number 920. May an order be issued for a train to wait at one or more stations "for all trains"?*

ANSWER. The rules do not contemplate an order of that kind, but no serious objection would be offered, if only used for all *opposing* trains. It should not be issued for "all" trains, thus allowing trains to use it to run ahead of the train directed to wait, because in the absence of orders to run late, the train may arrive at the station where it is to wait much ahead of the time limit, expecting the order to be changed. It would be much better to direct that the train shall wait for all west-bound trains; and the waiting train should then remember

that opposing trains of the same class can use up to the last minute of its time and must therefore approach such points prepared to stop.

*Question Number 921. Under Order No. 2, when must No. 15 and Extra 455 West be clear of the main track at C?*

ANSWER. No. 15, a train of same class, must clear by 10 a. m.; the extra by 9.55 a. m.

*Question Number 922. No. 15 finds that in order to make C by 10 a. m., it must pass B a minute or two in advance of its time-table time; may it do so?*

ANSWER. No.

*Question Number 923. If a train receiving a "wait" order has a disconnected "dead" engine, a steam shovel, an excavator, or other freight which it could not safely haul at the speed that would be required in order to make a station by the time given in the order, may it consider such "wait" order as permission to disregard the necessity for slow running?*

ANSWER. No. The slow speed prescribed, or necessary, must not be exceeded.

#### CHART NO. 42.

*Order No 1.  
No 2 will wait at D until  
10 a m, C 10 15 a m and  
B 10 30 a m.*

LECTURE. A dispatcher is sometimes confronted with a peculiar condition, where he expects one or more trains to report for orders within a short time,

and is not sure what engines will run the trains or what kind of trains he shall make them. He knows that a fast opposing train is near its last stopping place, and would like to instruct such train to wait at several stations until certain times, so that he can move the expected trains when they are ready. In such case, it would be convenient to give an order reading as shown by Chart No. 42, without specifying the trains to be waited for. The order need not delay the superior opposing train, as the dispatcher knows when it can pass such stations. This form of order has been discussed a great deal and is used by some dispatchers. It is certainly very simple and advantageous, and its use is recommended. A "run late" order cannot always be made to serve in such a case.

## CHART NO. 43.

<p><i>Order No 1.</i>  <i>No 2 will wait at C until 10 a m for No 15.</i></p> <p><i>Order No 2.</i>  <i>No 2 will run 30 min late C to A.</i></p> <p><i>Order No 3.</i>  <i>No 2 will run 1 hour late C to A.</i></p> <p><i>Order No 4.</i>  <i>C &amp; E No 2 C.</i>  <i>C &amp; E No 15 B.</i>  <i>No 2 will wait at C until 9 45 a m for No 15.</i>  <i>(No 2 is due at C at 9 a m.)</i></p>
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*Question Number 924. Under Orders No. 1 and No. 2, Chart No. 43, may train No. 2 leave C before 10 a. m., upon receipt of Order No. 2?*

**ANSWER.** The second order in no way modifies the first. No. 2 must fulfill both orders. It must

wait at C until 10 a. m., unless No. 15 arrives before that time, and run not less than thirty minutes late, C to A.

*Question Number 925. Under both orders, what must be understood by No. 15?*

ANSWER. No. 15 may go to C, or any station between A and C that it can make by 9.55 a. m., or that it can make by the time No. 2 is twenty-five minutes late.

*Question Number 926. Should No. 15 receive Orders No. 3 and No. 4, how must they be understood?*

ANSWER. Order No. 4 allows No. 15 less time than they had under Order No. 3, and although Order No. 3 has not been superseded, No. 15 should not use the full hour after receiving an order which seems to indicate that a mistake has been made, but should clear No. 2 at C by 9.40 a. m., unless an explanation is had. Order No. 3 may have been annulled and No. 15 may have failed to receive the notice. If Order No. 4 had been issued first, there could then be no doubt.

*Question Number 927. If an operator receives an order addressed only to himself, stating that No. 2 will wait at his station until 10 a. m. for No. 15, which order signal must he display at "stop," and when must he change it to "proceed."*

ANSWER. He must display the order signal which would hold No. 2. He may change it to "proceed" when copies of the order have been delivered to the conductor and engineman of No. 2; or when No. 15

has arrived and he knows the entire train is clear of the main track; or when the time named in the order has expired, if both trains fail to arrive. He must not consider the clearance required between trains.

*Question Number 928. If the order were also addressed to No. 2, when should the operator change the order signal to "proceed"?*

ANSWER. He may change it after he has delivered the order to No. 2. He has nothing to do with the contents of an order which is addressed to a train, unless the order is annulled or the train addressed loses class.

CHART NO. 44.

*Order No 1.  
No 2 will take siding and wait  
at C until 9 55 p m for No 15.*

*Question Number 929. What is there objectionable about Order No. 1, Chart No. 44?*

ANSWER. If No. 15 makes C, it must reach there by 9.50 p. m., and, under the order, will hold the main track. If No. 2 arrives at C before 9.55 p. m., it must take the siding; but if it does not reach C by 9.55 p. m., it is entitled to the main track at that station and may find No. 15 there also on the main track. Of course, No. 15 must protect itself at and after 9.50 p. m., and No. 2 must approach C under entire control, but such an order should not be issued if possible to avoid it.

## CHART NO. 45.

<p><i>Order No 1.</i>  <i>No 1 will run on the following schedule:</i>  <i>Leave A 11 30 p m</i>  <i>Leave B 12 25 a m</i>  <i>Leave C 1 47 a m</i>  <i>Arrive D 2 22 a m</i></p> <p><i>Order No 2.</i>  <i>No 1 will run 30 min later than time shown in Order No 1.</i></p>
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*Question Number 930. What effect does Order No. 1, Chart No. 45, have upon No. 1?*

ANSWER. It makes its schedule time at the stations named as much later as is stated in the order.

*Question Number 931. How must inferior trains receiving the order run with respect to it?*

ANSWER. The same as if it were No. 1's time-table time.

*Question Number 932. If No. 1 were due (by time-table) at C at 1.50 a. m. and (through error) the dispatcher were to schedule it to leave there at 1.47 a. m., without in so many words stating that the train would leave C in advance of its time-table schedule time, could it pass such point ahead of its time-table time on the above "late-schedule" order?*

ANSWER. No. A late-schedule order must not be construed as authorizing a train to leave a station ahead of its time-table time, as such schedule order may not be given to every train on the road. Inferior trains not receiving it would be required to only clear No. 1's time-table time.

*Question Number 933. If the order were to require No. 1 to run two hours behind its time-table time, when would it lose right and class?*

ANSWER. When twelve hours behind its *time-table* schedule; it would have ten hours' life on the late schedule.

*Question Number 934. Assuming Order No. 1 to make No. 1's time just two hours behind its time-table schedule at D, when must No. 16, which received the order at E, be clear of the main track at D?*

ANSWER. No. 16 must be "in to clear" at D at 12.17 a. m. No. 1 is not restricted as to its time of leaving D.

*Question Number 935. May not train No. 16 go to D at any time before the time that No. 1 must pass C on the order?*

ANSWER. No. As the superiority of No. 1 is not restricted between D and E, there is nothing to prevent the dispatcher from starting a first section of No. 1 from D, on time, should the necessity arise.

*Question Number 936. If the order were to read, "Leave D at 2.22 a. m.," instead of "arrive," would that alter the case?*

ANSWER. Yes; No. 16 could then go to D at any time before 2.17 a. m.

*Question Number 937. When Order No. 2 is issued, what must be understood?*

ANSWER. Simply that the schedule as shown in Order No. 1 is made thirty minutes later at the stations named.



## FORM F. FOR SECTIONS.

\_\_\_\_\_ will display signals \_\_\_\_\_ to \_\_\_\_\_ for \_\_\_\_\_.

## EXAMPLES.

*Eng 20 will display signals and run as 1st No 1 London to Paris.*

*No 1 will display signals London to Dover for Eng 85.*

*2d No 1 will display signals London to Dover for Eng. 90.*

This form may be modified as follows:

*Eng 70 85 and 90 will run as 1st 2d and 3d No 1.*

*Eng 70 85 and 90 will run as 1st 2d and 3d No 1 London to Dover.*

Under these examples the engine last named will not display signals.

For annulling a section:

*Eng 85 is annulled as 2d No 1 from Chatham.*

If there are other sections following, add:

*Following sections will change numbers accordingly.*

The character of a train for which signals are displayed may be stated. Each section affected by the order must have copies, and must arrange signals accordingly.

## CHART NO. 46.

*Order No 1.*

*C & E Eng 20 A.*

*Eng 20 will display signals and run as 1st No 1 A to E.*

*Order No 2.*

*C & E Eng 30 A.*

*Eng 30 will display signals and run as 2d No 1 A to E.*

*Order No 3.*

*Eng 20 will display signals and*

*run as 1st No 1 A to C and*

*run as 2d No 1 C to E.*

*Question Number 938. Are Orders No. 1 and No. 2, Chart No. 46, properly addressed?*

ANSWER. Yes. Orders must be addressed to engines or trains as they exist before the order is completed. An order creating an extra, or a section of a train, must be addressed to the engine; as it is known only by its engine number until it is assigned to a train.

*Question Number 939. May the "19" form be used for the movements in Chart No. 46?*

ANSWER. Yes.

*Question Number 940. If an engine were called to run 2d No. 1 and Order No. 1 were given to it, should it be understood that the engine became 2d No. 1 and the order was authority to run as such train?*

ANSWER. No. The engine must receive an order to run as 2d No. 1, as per Order No. 2.

*Question Number 941. Is it necessary for Order No. 2 to direct that signals be displayed for a third section?*

ANSWER. Not unless there is a third section to follow; all that is required is an order to run as 2d No. 1.

*Question Number 942. Must the men on the second section sign and receive a copy of the order creating the first section?*

ANSWER. No. Each order is independent of the other.

*Question Number 943. How are trainmen and enginemen to know that the section ahead has gone and that it displayed signals for a following section?*

ANSWER. By checking the train register.

*Question Number 944. If no train register happens to be located at such station?*

ANSWER. The train dispatcher then becomes responsible for knowing that signals have been ordered to be displayed before authorizing a section to follow. It is the duty of the men in charge of the second section simply to know that the first section has departed, and not to pass it.

*Question Number 945. When is this form of single order desirable?*

ANSWER. When the dispatcher does not know how many sections there will be, or what engines are to run them, or in what order they will report. It enables him to dispose of each section as it reports, and avoids annulling signal orders and reissuing them.

*Question Number 946. Is Order No. 3 in proper form and perfectly clear?*

ANSWER. It is not clear and, therefore, not in proper form. It may be understood by some to mean that 1st No. 1 will display signals only to C, and run from C to E as 2d No. 1 without displaying signals. Such an order should not be issued.

*Question Number 947. If a train were to receive an order of this kind, how should it be governed?*

ANSWER. It must not take down its signals at C, unless a later order is given it instructing it to do so.

## CHART NO. 47.

*Order No 1.*  
*C & E No 1 and Eng 85 A.*  
*No 1 will display signals A to E for Eng 85.*

*Order No 2.*  
*C & E 2d No 1 and Eng 90 A.*  
*2d No 1 will display signals A to E for Eng 90.*

*Question Number 948. Are Orders No. 1 and No. 2, Chart No. 47, properly addressed?*

ANSWER. Yes; they must not be addressed otherwise.

*Question Number 949. What is the effect of Order No. 1?*

ANSWER. It creates two sections of No. 1 from A to E, and the crew of Engine 85 must sign and accept the order with the understanding that it makes their engine, with or without cars, the second section of train No. 1.

*Question Number 950. If it is desired to create a third section, how may it be done?*

ANSWER. As shown by Order No. 2.

*Question Number 951. Must the conductor of 2d No. 1 (that is, engine 85) sign both orders (No. 1 and No. 2)?*

ANSWER. Yes. Order No. 1 creates a second No. 1, and Order No. 2 instructs that section to display signals for a following section (engine 90).

## CHART NO. 48.

*Order No 1.*  
*Engs 70 85 and 90 will run as 1st 2d*  
*and 3d No 1.*

*Order No 2.*  
*Engs 70 85 and 90 will run as 1st 2d*  
*and 3d No 1 A to E.*

*Order No 3.*  
*Engs 70 85 and 90 will run as 1st 2d*  
*and 3d No 1 A to C.*

*Question Number 952. Is Order No. 1, Chart No. 48, in proper form, no limits having been named?*

ANSWER. Yes; it creates three sections over an entire district.

*Question Number 953. How far may the sections run on such order?*

ANSWER. From the point where the order is issued to the end of the run on the district.

*Question Number 954. Should the limits be stated, as shown in Order No. 2?*

ANSWER. It is better to name the limits when dispatchers are not pressed for time and can do so as well as not.

*Question Number 955. Under Order No. 3, what must the three sections understand and do at C?*

ANSWER. They must take the siding. All of them cease to exist as trains upon arrival at that station.

*Question Number 956. Engine 70 is the regular engine of train No. 1; may it not, therefore, hold the main track at C and continue to run as No. 1 without further orders?*

ANSWER. No; all the sections must take the siding.

*Question Number 957. How may the order be worded so as to allow engine 70 to become No. 1 and so hold the main track at C and then proceed?*

ANSWER. By adding to Order No. 3 the words, "Eng 70 will run as No 1 C to E."

*Question Number 958. May the first, or any other section, proceed from C as No. 1 on a message or a clearance card; or must an order to run as No. 1 be received?*

ANSWER. The section referred to may proceed only by train order creating it a train, as C is the end of the run under Order No. 3.

LECTURE. When a regular train is given a clearance card at its initial station, or an order is addressed and delivered to it and it registers as leaving, it is thereby established over the entire district, unless other limits be mentioned, and the schedule belongs to that train until taken away from it by train order. No other train can run from that point on the same schedule, because, in checking the train register, the schedule will be found to have been already assumed by a train on the road. When directed by train order to run as a train, or section, to a certain station, authority to go beyond such station can only be given by a train order; the remainder of such schedule it is the duty of the dispatcher to provide for.

*Question Number 959. Under Order No. 3, may the dispatcher authorize other engines to run as sections of No. 1 from C before the three sections run-*

*ning from A to C arrive at C, and without advising them that he purposes doing so?*

ANSWER. Yes; and if other engines run beyond C on their own judgment, or a clearance card, there may be two trains each called No. 1 on the road at the same time and within the same limits. If a train were to run on a clearance card alone, it would be assuming to be what it is not, because not authorized by rule or created by the dispatcher.

LECTURE. There can be no train on the road except as authorized by the time-table or created by a train order. For instance, No. 15 must not start from any station, except its initial point, without a train order to run as No. 15. It may not run extra from A to C, and then run as No. 15 from C on the supposition that it is No. 15 merely because it happens to be the crew, engine and cars that regularly belong on that run. Nor can No. 1, in case of accident or washout, run over some other road to a junction point with its own road and then start from such junction without a train order creating them No. 1, even though they be a regular passenger train and are scheduled out of such junction station as No. 1. A message or clearance card gives no authority to proceed.

CHART NO. 49.

*Order No 1.*

*C & E No 1 and Eng 85 A.*

*No 1 will display signals A to C for Eng 85.*

*Order No 2.*

*C & E Engs 323 and 85 A.*

*Engs 323 and 85 will run as 1st and 2d No 1 A to C. Eng 85 will run as No 1 C to E.*

*Question Number 960. If No. 1 is instructed to display signals from A to C for a second section, as*

*shown by Order No. 1, Chart 49, what must the first section do at C?*

ANSWER. It must hold the main track, and after complying with Rule 96, will take down the signals; and, as the order was addressed to it as No. 1 at A, it again becomes No. 1 at C, after fulfilling the order, and will proceed from C without requiring further orders to run as No. 1.

*Question Number 961. What must 2d No. 1 understand and do at C?*

ANSWER. The order having been fulfilled, it must take the siding at the initial switch.

*Question Number 962. There may be some objection to addressing an order to No. 1 and engine 85 at the initial station, directing No. 1 to display signals from A to C for engine 85, as it may not be clear just what train is No. 1, or possibly it may be necessary to run an excursion train ahead of the regular train. What other form, therefore, may be properly used to direct the movement more explicitly?*

ANSWER. The engines may be addressed, as indicated by Order No. 2.

CHART NO. 50.

*Order No 1.*

*C & E No 1 and Eng 85 B.*

*No 1 will display signals B to C for Eng 85.*

*Order No 2.*

*C & E No 1 and Eng 85 B.*

*Engs 85 and 323 will run as 1st and 2d No 1  
B to C.*

*"Eng 323 will run as No 1 C to E."*

*(Eng 323 is on No 1 at B.)*



*Question Number 963. It is desired to run engine 85 as 2d No. 1 between intermediate stations; how may the movement be made?*

ANSWER. By addressing the order to No. 1 and engine 85, as shown in Order No. 1, Chart No. 50.

*Question Number 964. Must the regular train have an order to run as No. 1 from C?*

ANSWER. No; its schedule has not been taken away from it; it is simply made a section while running on its schedule between certain points. After fulfilling Order No. 1, the regular train addressed at B as No. 1 does not cease to be No. 1 and may proceed without further orders.

*Question Number 965. Should it be necessary to run engine 85 as 1st No. 1 and the regular as the second section, how should the movement be authorized, "No. 1" having engine 323?*

ANSWER. The form of the order should be as shown by Order No. 2.

*Question Number 966. Is it necessary to first annul engine 323 as No. 1?*

ANSWER. No.

*Question Number 967. What must 1st and 2d No. 1 understand and do at C in such case?*

ANSWER. 1st No. 1, engine 85, must take the siding at the initial switch and understand that it loses all right upon arrival there. 2d No. 1, engine 323, again becomes No. 1 as soon as C is reached, as the order which made them second section is then fulfilled. It will hold the main track at C and proceed without orders to run as No. 1.

*Question Number 968. Would there be any objection to the dispatcher adding to Order No. 2, "Eng 323 will run as No. 1, C to E," to avoid a possible misunderstanding, and to prevent engine 85 from holding the main track, expecting to run as No. 1 from C?*

ANSWER. There is no objection, and it is suggested that this be done, as it would make the movement so plain that there could then be no misunderstanding.

LECTURE. An ideal way to handle a heavy freight business on single track is to arrange time-tables so that freights will be scheduled about four or six hours apart in one direction only, and run all freight trains in the opposite direction as extras. This reduces the number of train orders and enables the dispatcher to start extra trains promptly, as they can be helped to a station for a certain section and may sometimes meet several more at such point without orders to do so and without delaying the sections of regular freights to ascertain what they are meeting; or the extras may make such station by time-table. Where this plan is followed operators, or certain designated employes, are authorized to start sections of trains for the dispatcher, thus relieving him of from twenty to forty orders daily. Starting sections of trains is simply routine duty and may safely be entrusted to the operators, the dispatcher instructing them how many sections he wishes to be run. There is much to be said in favor of this plan, as it secures additional safety, and extras are not moved against each other, nor are they delayed in getting started until a meeting point can be fixed with all

opposing extra trains that may be on the road. Companies that have given this plan a fair trial would not again use their former method of requiring train dispatchers to move freight both ways by extra trains, and to issue train orders instructing trains to run in sections.

## ORDERS FOR ANNULING SECTIONS.

### CHART NO. 51.

<p><i>Order No 1.</i>  <i>C &amp; E Engs 70 and 85 A.</i>  <i>Engs 70 and 85 will run as 1st and 2d</i>  <i>No 1 A to E.</i></p> <p><i>Order No 2.</i>  <i>C &amp; E 1st and 2d No 1 C.</i>  <i>Eng 85 is annulled as 2d No 1 from C.</i></p> <p><i>Order No 3.</i>  <i>C &amp; E No 1 and Eng 85 C.</i>  <i>No 1 will display signals C to E for</i>  <i>Eng 85.</i></p> <p><i>Order No 4.</i>  <i>C &amp; E 1st and 2d No 1 and Eng 90 C.</i>  <i>Eng 85 is annulled as 2d No 1 from</i>  <i>C. Eng 90 will run as 2d No 1 C to</i>  <i>E.</i></p>
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*Question Number 969. How must sections of a train be annulled—by their train numbers or by their engine numbers?*

ANSWER. By their engine numbers. Ordinarily they are created in the same manner.

*Question Number 970. May sections be annulled by use of Form K?*

ANSWER. The Code rules prescribe that sections shall be annulled by their engine numbers as per Form F. Form K is for the purpose of annulling regular trains which are not running in sections. It would not be proper to say, "2d No 1 of Feb 29th

is annulled Alaska to Halifax," but, instead, an order must be issued reading, "Eng 85 is annulled as 2d No 1 from Chatham"; adding, "following sections will change numbers accordingly," if there be following sections.

*Question Number 971. Can a section be annulled in one order and another order issued authorizing the same engine, or any other, to run as such section, between the points annulled?*

ANSWER. No. Sections cannot be annulled in one order and restored in another.

*Question Number 972. May one engine be annulled as a section, and another run in its place if the movement be made under one order?*

ANSWER. Yes; the section is not then annulled. The same order annulling one engine as the section goes on to direct another engine to run as such section instead; the section itself is not annulled; simply another engine is assigned to it by the same order. The change must not be made by separate orders, as the first order would annul the section and the later order would be an attempt to restore a train which has been annulled.

*Question Number 973. Should orders creating sections or annulling them be issued separate from other instructions?*

ANSWER. Yes; to add further instructions about meeting trains, etc., is likely to cause confusion, and it should not be done.

*Question Number 974. Under Orders No. 1 and No. 2, Chart No. 51, what must 1st and 2d No. 1 understand and do?*

ANSWER. 1st No. 1 must take down signals at C, protecting 2d No. 1 against opposing trains, as prescribed by Rule 96, and may then proceed as No. 1; it does not require orders to run from C to E. 2d No. 1 loses right and class at C and must clear the main track.

*Question Number 975. Between what points is 2d No. 1 annulled by Order No. 2?*

ANSWER. From C to the end of its run on that district, or the next district terminal, if limits are not given.

*Question Number 976. Would it be proper to send Order No. 3 after issuing Order No. 2, and if issued may it be accepted and acted upon?*

ANSWER. Order No. 3 in this connection is not proper and must not be accepted. After 2d No. 1 has been annulled from C, the dispatcher cannot instruct No. 1 to again display signals for engine 85, or any other, anywhere between C and the end of that train's run on that district.

*Question Number 977. What effect does Order No. 4 have upon 1st and 2d No. 1 and engine 90?*

ANSWER. 1st No. 1 does not take down signals; it is merely advised that another engine is running as 2d No. 1 from C in the place of engine 85. Engine 85 must understand that its right to run as 2d No. 1 is annulled from C and engine 90 must understand that it becomes 2d No. 1 from C to the end of its run on that district—presumably E.

## CHART NO. 52.

*Order No 1.**Engs 70 and 85 will run as 1st and 2d No 1 A to E.**Order No 2.**C & E 1st and 2d No 1 C.**Eng 70 is annulled as 1st No 1 from C following section will change number accordingly.*

*Question Number 978. Under Orders No. 1 and No. 2, Chart No. 52, in what way are 1st and 2d No. 1 affected at C?*

ANSWER. Order No. 1 creates two sections of No. 1, and Order No. 2 then annuls the engine running the first section from C and directs the following section to leave C in its place. As 2d No. 1 had no signals on arriving at C, it becomes train No. 1 leaving C.

*Question Number 979. Does 2d No. 1 require further orders to proceed from C as train No. 1?*

ANSWER. Order No. 2 fully instructs and authorizes it to run as train No. 1.

*Question Number 980. If there were three sections, instead of two, would the section arriving at C as second display signals on leaving C?*

ANSWER. Yes; the order would then be addressed to the three sections and read, "following sections will change numbers accordingly."

*Question Number 981. If, through error, the order did not so read, but the second section were displaying signals upon arrival at C, must it also display them leaving?*

ANSWER. Signals must never be taken down

until it is known that all following sections are annulled. In the case cited, the second section should call attention to the probable oversight and have it corrected before taking down signals.

CHART NO. 53.

*Order No 1.*

*Engs 20 70 85 and 90 will run as 1st 2d 3d and 4th No 15  
A to E.*

*Order No 2.*

*C & E 1st 2d 3d and 4th No 15 C.*

*Engs 20 and 90 are annulled as 1st and 4th No 15 from  
C following sections will change numbers accordingly.*

*Question Number 982. What effect does Order No. 2, Chart No. 53, have upon the four sections of No. 15 at C?*

ANSWER. It annuls the engines running 1st and 4th sections, and directs the remaining sections to change numbers and arrange signals accordingly. The second in runs first out; the third in runs as second out, and, knowing that the fourth section is annulled, takes down signals for it.

*Question Number 983. If the order were addressed to five sections, how should it then be understood?*

ANSWER. Careful attention must always be given to the address of such orders as trains are governed by the address in arranging numbers and signals, and the dispatcher must know that the order is addressed to all sections affected. If addressed to five sections, annulling two, it must be understood that there would then be three sections leaving C, and the numbers and signals must be arranged accordingly.

## CHART NO. 54.

Order No 1.  
 C & E 2d No 1 B.  
 C & E 1st No 1 D.  
 C & E Ex 452 East C.  
 Eng 85 is annulled as 2d No 1 from B.  
 "2d No 1 has arrived at B."

*Question Number 984. In giving Order No. 1, Chart No. 54, it will be supposed that the dispatcher did not know at the time when 1st No. 1 passed B that 2d No. 1 was to be annulled there or he would have addressed the order to 1st No. 1 also at that station. In that case, must 1st No. 1 take down signals at D?*

ANSWER. Yes; 1st No. 1 must take down signals wherever the order is received after passing B.

*Question Number 985. What must 2d No. 1 understand and do at B?*

ANSWER. 2d No. 1 is annulled from that station, and must clear the main track before acknowledging the order.

*Question Number 986. Extra 452 East makes C for No. 1 and its attention is called to the signals displayed by the first section. After 1st No. 1 has passed, it is given Order No. 1; may it then disregard such signals and proceed?*

ANSWER. All that Extra 452 East requires to enable it to leave C is authority to move against 2d No. 1; such authority is given when it receives notice of the annulment of 2d No. 1, as per Order No. 1.



*Question Number 987. Had Extra 452 East received an order to meet 2d No. 1 at C, would the annulment order allow it to proceed, or should it consider the possibility of there being a third section following?*

ANSWER. When the second section is annulled, the meeting order is rendered void. If there were a section following, the order would not be worded as it is.

*Question Number 988. How far may Extra 452 East run against 2d No. 1 under Order No. 1?*

ANSWER. As far as B, where it must take the siding.

*Question Number 989. If the words, "2d No. 1 has arrived at B," were added to Order No. 1, how would it affect the extra?*

ANSWER. It would then not be required to take the siding at B.

*Question Number 990. If it would delay 1st No. 1 to stop it at D, to take down its signals, is it still imperative that the order be addressed to it at that point, or might it be allowed to display them to its next regular stop, or even to the end of its run?*

ANSWER. The order annulling the section for which it is displaying signals may be addressed to 1st No. 1 at B or anywhere beyond, or it may be allowed to display the signals to the end of its run and Order No. 1 be addressed to other trains affected.

*Question Number 991. If 1st No. 1 receive Order No. 1, is it then imperative that it take down its signals?*

ANSWER. Yes; Rule 220 so provides. The order is addressed to 1st No. 1 with that very object in view, and to avoid the formality of helping trains against a section that does not exist.

CHART NO. 55.

*Order No 1.*  
*C & E 1st No 1 D.*  
*C & E Ex 452 East C.*  
*Eng 85 is annulled as 2d No 1 from B.*  
*Eng 90 will run as 2d No 1 B to E.*

*Order No 2.*  
*C & E 1st 2d and 3d No 1 B.*  
*Eng 85 is annulled as 2d No 1 from*  
*B following section will change number*  
*accordingly.*

*Question Number 992. Under Order No. 1, Chart No. 55, should 1st No. 1 take down its signals?*

ANSWER. No. 2d No. 1 is not annulled.

*Question Number 993. If a copy of the order were issued for Extra 452 East at C, could it run to B against 2d No. 1?*

ANSWER. No. It should understand merely that 2d No. 1's engine had been changed from 85 to 90, which would be important to know in case of a previous order to meet it giving its engine number as 85.

*Question Number 994. When 1st No. 1 receives Order No. 2, what should it understand?*

ANSWER. That the section following 2d No. 1 is directed to take its place; one section of the group is dropped out.

*Question Number 995. Should 1st No. 1 take down its signals in that case?*

ANSWER. No; 2d No. 1 is not annulled.

*Question Number 996. If Order No. 2 were addressed only to 1st No. 1, or 1st and 2d No. 1, may the first section take down its signals?*

ANSWER. No; the order clearly indicates that a following section will move up and run as 2d No. 1. It would be well, however, to ask about the order; it may have been improperly addressed.

*Question Number 997. Should Extra 452 East understand Order No. 2 to mean that 2d No. 1 is annulled and proceed?*

ANSWER. No.

*Question Number 998. When may it be understood that a section is annulled?*

ANSWER. When an order similar to the following is received: "Eng 85 is annulled as 2d No 1 from C," and such order stops there; if it continues and in addition states that some other engine will run in the place of the engine annulled, or reads, "following section, or sections, will change number, or numbers, accordingly," the section is not annulled.

CHART NO. 56.

*Order No 1.*

*C & E Engs 70 85 and 90 A.*

*Engs 70 85 and 90 will run as 1st 2d and 3d No 1 A to E.*

*Order No 2.*

*C & E 1st 2d and 3d No 1 B.*

*Eng 90 is annulled as 3d No 1 from B.*

*Order No 3.*

*C & E 1st and 2d No 1 C.*

*Eng 85 is annulled as 2d No 1 from C.*

*Question Number 999. Under what circumstances is it necessary to advise 1st No. 1 when the third section is annulled?*

ANSWER. When a previous order has been given to it, indicating that there are more than two sections and it is intended afterward to annul all sections, except the first.

*Question Number 1000. If all sections hold Order No. 1, Chart 56, and Order No. 2 is addressed to 1st, 2d and 3d No. 1, what must each section understand and do at B?*

ANSWER. 1st No. 1 must understand that 3d No. 1 is annulled and that the order is issued to first No. 1 because it will afterward require to have knowledge of such annulment. The second section must arrange to protect the third, and then take down the signals. The third section is annulled from B.

*Question Number 1001. When Order No. 3 is received at C, what must be understood by 1st No. 1?*

ANSWER. As 1st No. 1 has previously received the order annulling 3d No. 1, it takes down its signals.

*Question Number 1002. If 1st No. 1 were to receive only Orders No. 1 and No. 3, may it take down the signals?*

ANSWER. No. Order No. 1 indicates that there are three sections, and signals must not be taken down by 1st No. 1 until it knows positively that *all* following sections are annulled.

## CHART NO. 57.

*Order No 12.**C & E 1st and 2d No 15 C.**Engs 85 and 90 are annulled as 1st and 2d No 15 from C.**Engs 90 and 85 will run as 1st and 2d No 15 C to E.**Order No 14.**C & E 1st and 2d No 15 C.**Order No 8 is annulled. Engs 90 and 85 will run as 1st**and 2d No 15 C to E. Eng 90 will pass Eng 85 at E.**Order No 15.**C & E 1st and 2d No 15 C.**Engs 85 and 90 are annulled as 1st and 2d No 15 from C.**Order No 16.**C & E Engs 90 and 85 C.**Engs 90 and 85 will run as 1st and 2d No 15 C to E.*

*Question Number 1003. It is sometimes necessary to run one section around another; how should the movement be ordered?*

ANSWER. Order No. 12, Chart No. 57, is preferable and recommended as it is very plain. There can be no understanding other than that engine 90 will arrive at C as 2d No. 15, pass engine 85 there, display signals and leave as 1st No. 15. Engine 85 arrives as 1st No. 15, allows engine 90 to pass and leaves as 2d No. 15 without signals. The movement being made by one order does not annul No. 15.

*Question Number 1004. Is there another way of accomplishing the same result?*

ANSWER. Yes; Order No. 14 may be used. In that case, Order No. 8 is understood to be the order previously issued creating the two sections.

*Question Number 1005. Why must Order No. 14 read, "Eng 90 will pass Eng 85 at C"?*

ANSWER. To prevent a misunderstanding. When Order No. 8 is annulled, there is nothing to clearly indicate that engine 85 must wait to allow any engine to pass it at C. If there is no train register at C, it would be possible for engine 85 to assume that 1st No. 15 had gone and then actually proceed ahead of it, if the orders creating the sections were issued to each engine separately. Order No. 12 shows very clearly that the engines named will arrive at C as 1st and 2d No. 15, and that they must leave C in reverse order.

*Question Number 1006. May the movement be made as indicated by Orders No. 15 and No. 16?*

ANSWER. No. Order No. 15 annuls both sections. Order No. 16 is an attempt to restore a schedule which has been annulled. The movement must be authorized by one order.

*Question Number 1007. Would an order reading, "4th No 1 will exchange with and pass 3d 2d and 1st No 1 when overtaken," be authority for the train receiving it while running as 4th No. 1 to pass all sections ahead at stations where overtaken?*

ANSWER. No. After 4th No. 1 exchanges with 3d No. 1 it loses its right to act further on the order since it is not then 4th No. 1. If such a movement must be made, the order authorizing it should read, "Eng 85, which left A as 4th No 1, will pass 3d 2d and 1st No 1 when overtaken and all sections will exchange numbers with it and arrange signals accordingly."

*Question Number 1008. When the identity of a train is changed, how must the order be signed?*

ANSWER. Conductors must endorse the number of their train as it will be after the order is completed, and not the number given in the address.

*Question Number 1009. When one section is run around another, as shown by Order No. 12, what precautions must be taken by the dispatcher and the trainmen and enginemen to prevent opposing inferior trains from leaving C before the arrival of 2d No. 15?*

ANSWER. Opposing trains must be advised, when necessary. 1st No. 15, on arriving, must not take down its signals until 2d No. 15 arrives, and it must inform other trains that it arrived as 1st No. 15, and that 2d No. 15 has not arrived.

*Question Number 1010. When necessary to change a train register, on account of a train being registered as having no signals when they displayed green, or as having green signals when they were not displaying signals, how must it be done?*

ANSWER. A train order must be issued instructing the operator to change the register to conform to the facts. If practicable, before changing the entry made by conductor, the operator should procure a witness who can, in event of dispute, certify to the way the train was originally registered. The operator may make the change in red ink and should show to all trains affected a copy of the order authorizing the change. Or the dispatcher may instruct trains by train order, if desired, and not allow any alteration to be made in the register.

## CHART NO. 58.

*Order No 1.  
C & E No 15 and Eng 20 C.  
Eng 20 will run as No 15 C to E  
instead of Eng 70.*

*Question Number 1011. If the dispatcher takes away from a train its authority to run on a schedule and gives the schedule to another (perhaps needing the engine crew for a work train, or on a branch, and not caring to annul the schedule, as he may wish another engine to use it later on), how may the movement be made?*

ANSWER. As indicated by Order No. 1, Chart No. 58.

*Question Number 1012. Should it develop that engine 20 is not the right one, what may the dispatcher do?*

ANSWER. He may issue another order reading, "Eng 30 will run as No 15, C to E, instead of Eng 20." It is not necessary to deliver Order No. 1 to the crew of Engine 30; and perhaps the words "instead of" may be omitted, unless other trains are affected by the engine number.

*Question Number 1013. May one order be issued to annul engine 70 as No. 15, and another order to run the engine which is to take its place as such train?*

ANSWER. No; that would be an attempt to restore a train which would seem to have been annulled. The schedule must be kept in existence. by an engine number, even though the order must be



again changed by reason of the wrong engine number being furnished.

*Question Number 1014. If an engine breaks down and another be furnished, or the engine is taken to the shop for repairs, and another one procured, is it then necessary to issue Order No. 1?*

ANSWER. No. A regular train may change engines at any time, or return for another engine, without having their schedule annulled for one engine and restored to another. Order No. 1 contemplates cases where the schedule is actually taken away from one engine and given to another, and it is done in such manner that the engine crew previously possessing the schedule may know that they have surrendered it and cannot again run on it without a train order to do so.

*Question Number 1015. In case of an extra train, or a section, is Order No. 1 necessary, or may the crew running such extra or section procure another engine and proceed?*

ANSWER. A regular train may change engines and after changing engines may proceed without a train order; but sections and extra trains must receive orders annulling their former engine and substituting the one which they take in its place.

#### FORM G. EXTRA TRAINS.

- (1.) Eng \_\_\_\_\_ will run extra \_\_\_\_\_ to \_\_\_\_\_.  
 (2.) Eng \_\_\_\_\_ will run extra \_\_\_\_\_ to \_\_\_\_\_  
 and return to \_\_\_\_\_.

#### EXAMPLES.

- (1.) *Eng 99 will run extra Berber to Gaza.*  
 (2.) *Eng 99 will run extra Berber to Gaza and return to Cabul.*

A train receiving this order is not required to protect itself against opposing extra trains, unless directed by order to do so, but must keep clear of all regular trains, as required by rule.

(3.) Eng \_\_\_\_\_ will run extra leaving \_\_\_\_\_ on \_\_\_\_\_ as follows with right over all trains.

Leave \_\_\_\_\_.

" \_\_\_\_\_.

Arrive \_\_\_\_\_.

EXAMPLE.

(3.) Eng 77 will run extra leaving Turin on Thursday Feb 17th as follows with right over all trains.

Leave Turin 11 30 p m

" Pekin 12 25 a m

" Canton 1 47 a m

Arrive Rome 2 22 a m

This order may be varied by specifying the kind of extra and the particular trains over which the extra shall or shall not have the right. Trains over which the extra is thus given the right must clear the time of the extra five minutes.

CHART NO. 59.

Order No 1.  
Eng 99 will run extra A to C.

Order No 2.  
Eng 99 will run extra A to C  
and return to B.

*Question Number 1016. When an engine receives an order to run extra, is it required to keep clear of opposing extra trains?*

ANSWER. Not unless the order so directs.

*Question Number 1017. How many minutes are extra trains required to clear all regular trains?*

ANSWER. At least five minutes.

*Question Number 1018. Must extra trains take the siding at the station last named in their running orders?*

ANSWER. Yes; except that at district terminals the yardmaster generally indicates which track shall be used. In the absence of such instructions they must take siding at such terminals.

*Question Number 1019. If a round-trip order be issued directing an extra to return to the station from which it starts, is it necessary to repeat the name of such station?*

ANSWER. No; the order may read, "Eng 99 will run extra A to C and return."

*Question Number 1020. If a round-trip order is issued, A to C and return, must the extra go to C before starting back?*

ANSWER. Technically, the order is not otherwise fulfilled; but if the necessity arises there can be no serious objection to the train returning without running to C.

*Question Number 1021. If C were a terminal, would it be necessary to procure a clearance card before starting on the return trip?*

ANSWER. The order would seem to relieve the train from this requirement. If the office is open, a clearance card should be obtained; if not, the operator need not be called up to get it. The dispatcher should understand that the train is not required to report at such stations and obtain a clearance card before returning.

*Question Number 1022. May the dispatcher have the order signal displayed at "stop," in advance of*

*the train, while running from A to C, and depend upon such signal to hold it for a following train, before starting on its return trip?*

ANSWER. No; the extra is likely to return from any point. He may so hold it going West for an east-bound train, but should understand that the extra need not go to C before it can start back. Round-trip orders are objectionable for this and other reasons, and should not be given if it can be avoided. A wrecking train may have to be started at any time.

*Question Number 1023. If A is a main-line station, C a junction with a branch, and G the terminal station on the branch, may the dispatcher issue an order for an engine to run extra from A to G and return, and then, when about to issue orders holding the extra at C or G, depend upon the requirement that all trains on the branch must receive a clearance card at C and G?*

ANSWER. No; the round-trip order would relieve such extra from reporting at C or G for further orders, or a clearance card, as required by Rule 83 (A).

*Question Number 1024. If an order is issued for a train to run extra, when does such order become void?*

ANSWER. Upon arrival of the extra train at the station last named in the running order.

*Question Number 1025. If an order were issued for an engine to run extra, December 31, 1903, may such extra use the order January 1, 1904, in case it fails to leave on the date specified?*

ANSWER. The order is in effect indefinitely, until the station last named is reached.

*Question Number 1026. If an extra receives an order to run from A to C and at C is given an order to run extra to some other point, and the order signal at C indicates "stop," must a clearance card be obtained, or may Rule 83 (A) be understood to apply at intermediate stations?*

ANSWER. It must get a clearance card, as the running order gives no clearance against a train-order signal. When a train-order signal indicates "stop," a clearance card must be obtained. Rule 83 (A) should be applied only at initial stations where there are no train-order signals.

*Question Number 1027. When the dispatcher completes an order for an extra to run, or clears any train at any time at the starting point and there are overdue superior trains, what would be a safe and prudent practice for him to follow, especially when such superior trains are much behind their schedule?*

ANSWER. He should inform the train that it cannot leave until the arrival of the superior trains. He may begin the order thus, "After No 15 arrives at A, Eng 455 will run extra A to C." It is not, however, obligatory upon him to do so, as the conductor must check the train register and know whether the superior trains have arrived or not; but it is a part of a dispatcher's duty, however, to prevent misunderstanding. When a train starts from a point where there is no train register, the dispatcher must advise whether or not overdue trains have passed.

*Question Number 1028. Before giving an order to run extra, what precaution must be taken by the dispatcher?*

ANSWER. He must enter such extra on the train sheet, then look over his sheet, to ascertain if there are opposing extras, and, if so, hold them for the extra which is being started.

*Question Number 1029. On which train-sheet must extra and regular trains be registered?*

ANSWER. Extra trains must be entered on the sheet corresponding with the date they actually leave. Regular trains must be shown on the sheet corresponding with the date they are due to leave their initial stations.

*Question Number 1030. If given an order to meet Extra 453, and an extra passes the station with the head-light of engine 453, or the figures are so dim that it cannot be determined positively whether the engine is 453 or not, what must be done?*

ANSWER. The waiting train must not leave the meeting point until the extra which it is ordered to meet has been positively identified.

CHART NO. 60.

<i>Order No 1.</i>	<i>Completed at 2 p m.</i>
<i>Eng 455 will run extra A to C and meet No 2 and Extra 452 East at C.</i>	
<i>Order No 2.</i>	<i>Completed at 3 p m.</i>
<i>Eng 455 will run extra C to E and meet No 2 at D.</i>	

*Question Number 1031. Under Orders No. 1 and No. 2, Chart No. 60, may Extra 455 West leave C before Extra 452 East arrives, and may it go to D*

*for No. 2 without the words "instead of" being added to Order No. 2?*

ANSWER. When Extra 455 West arrives at C Order No. 1 is fulfilled. When Order No. 2 is issued for it, it becomes a new train, starting on a new trip, without regard to orders which it held while running as a previous extra. It is not held at C for Extra 452 East and the words "instead of" need not appear in Order No. 2 to allow Extra 455 to meet No. 2 at D. However, if No. 2 had previously received an order to meet Extra 455 West at C, the words "instead of" would have to be inserted in Order No. 2 for the guidance of train No. 2.

LECTURE. The question of right of Extra 455 West to leave C before the arrival of Extra 452 East may be raised. The theory upon which the decision is based that it may do so under Orders No. 1 and No. 2 is that one hour after an order ceases to exist because of its fulfilment is as good as one week. The same principle applies in cases where an order to run extra is issued but a short time after former running orders have been fulfilled.

*Question Number 1032. May the dispatcher depend upon Order No. 1 to hold Extra 455 West at C for Extra 452 East?*

ANSWER. No; he must provide for Extra 455 West meeting Extra 452 East when he again creates Extra 455.

*Question Number 1033. In what manner may he do so?*

ANSWER. Preferably by wording the order thus :

“After Extra 452 East arrives at C, Eng 455 will run extra C to E.” Or, Extra 455 West may be directed to meet Extra 452 East at C or elsewhere.

*Question Number 1034. While it is true that Extra 455 West is not held at C for Extra 452 East, after receiving new running orders, what would it be best to do in case the dispatcher offers no explanation or makes no provision for meeting Extra 452 East when new running orders are issued?*

ANSWER. There could be no objection to the operator, or the trainmen or enginemen, asking him about Extra 452 East, in case no meeting point is fixed. It is true the dispatcher would be entirely responsible if this precaution were not taken by the employes mentioned, and a collision resulted. Of course, Extra 452 East may have arrived at D and been annulled from that station before Extra 455 West is authorized to run extra from C; in which case no “meeting” order would be necessary. At the same time it would be well to show that Engine 452 East had not been overlooked.

*Question Number 1035. If the train running extra, A to C, held an order annulling a train, or a slow order which governed beyond C, what should be understood with regard to such orders when the new extra is created?*

ANSWER. All orders held by the extra become void upon its arrival at C, but it would be unnecessary to revive the annulment order, as the train annulled cannot be restored. The slow order, however, should be respected notwithstanding it was in effect only while the extra was running from A to C, or (and better), it should be renewed.



## CHART NO. 61.

*Order No 1.*

*Eng 455 will run extra A to C  
and meet No 16 at E. No 1  
will run 1 hour late A to E.*

*Order No 2.*

*Eng 455 will run extra A to C  
and return to B. No 1 will  
run 1 hour late A to E.*

*Question Number 1036. May an order be issued or accepted running an extra from A to C and directing it to meet No. 16 at E, a station beyond the running limits?*

ANSWER. No. Under Order No. 1, Chart No. 61, there is nothing created beyond C.

*Question Number 1037. If the order were issued and accepted, may Extra 455 West proceed to E for No. 16, after another running order has been given it at C?*

ANSWER. No.

*Question Number 1038. Is there any objection to the instructions for No. 1 to run one hour late?*

ANSWER. No; but the order becomes void for Extra 455 West upon its arrival at C, and must be reissued for the trip from C to E. A train ordered to run extra only to C cannot accept an order at A, reading, "No 1 will run 1 hour late A to E," with the understanding that the late-running time will still be in effect when new orders are issued for the extra at C.

*Question Number 1039. Under Order No. 2, may the extra use one hour of No. 1's time in returning from C to B?*

ANSWER. Yes.

*Question Number 1040. If engine 455 receives an order to run extra, A to C, with the right to use an hour of No. 1's time, and is there given an order to run extra C to A, may it use the one hour's time in returning to A?*

ANSWER. Not unless it is again given the right to do so at or after the time its new running orders are completed.

*Question Number 1041. If a helper-engine couples to No. 15 at A to help it to C, and receives an order addressed to No. 15, or "all concerned," making No. 1 run one hour late, may the "helper," after reaching C and receiving an order to return extra to A, use the hour's time against No. 1?*

ANSWER. No; the helper loses all its rights the moment it cuts off from the train it is helping. It then becomes another train when returning, and in its new orders the right to use one hour of No. 1's time must be stated.

*Question Number 1042. In such cases, how may the dispatcher issue time orders?*

ANSWER. He may address a "31" order to trains that need to use the time, at the several stations, and complete it after the running orders are completed.

CHART NO. 62.

*Order No 1.*

*Eng 455 will run extra A to E.*

*Order No 2.*

*Eng 455 will run extra C to B and return.*

*Order No 3.*

*Order No 1 is annulled. Eng 455 will run extra C to B and return to E.*

*Question Number 1043. Under Orders No. 1 and No. 2, Chart 62, it was found necessary to send Extra 455 back from C to B. When it returns to C, may it proceed to E on Order No. 1?*

ANSWER. Order No. 1 has not been fulfilled, superseded or annulled; there is, therefore, nothing to prevent the extra from understanding that it may continue on its trip to E without further running orders.

*Question Number 1044. Should the movement be handled in this manner?*

ANSWER. It would be better to arrange as indicated by Order No. 3.

CHART NO. 63.

<p><i>Order No 1.</i>  <i>Eng 455 will run extra A to E</i>  <i>and meet No 16 at E.</i></p> <p><i>Order No 2.</i>  <i>Eng 455 will run extra C to B.</i></p> <p><i>Order No 3.</i>  <i>Eng 455 will run extra B to C</i>  <i>and meet No 16 at C.</i></p>
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*Question Number 1045. Under Orders No. 1, No. 2 and No. 3, Chart 63, where do No. 16 and Extra 455 West meet?*

ANSWER. When Extra 455 arrives at B under Order No. 2, that order is fulfilled. When C is reached, under Order No. 3, that order becomes void, and as Order No. 1 has not been fulfilled, superseded or annulled, there is nothing to prevent the extra from proceeding to E to meet No. 16. Even if No. 16 were to receive all of the orders they

should not leave E, because the words "instead of" were not added.

*Question Number 1046. If "instead of E" were added to Order No. 3, in what way would the trains be affected?*

ANSWER. No. 16 would come to C, and Extra 455 West would take the siding and meet No. 16 there. But that part of the order creating the extra would not thereby be superseded, and, upon arrival of No. 16 at C, the extra could proceed to E without new running orders.

*Question Number 1047. Would it be proper to move the trains in this manner?*

ANSWER. Order No. 1 should have been annulled. It is not proper to give orders which will admit of uncertain or opposite interpretations.

CHART NO. 64.

<p><i>Order No 1.</i> <i>Eng 455 will run extra A to E.</i></p> <p><i>Order No 2.</i> <i>Eng 452 will run as a preferred extra E to A.</i></p> <p><i>Order No 3.</i> <i>Preferred Extra 452 East will wait at C until 10 a m for Extra 455 West.</i></p>
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*Question Number 1048. Under Orders No. 1, No. 2 and No. 3, Chart No. 64, are the rights of extras properly protected? Would it be possible for them to collide?*

ANSWER. The movement is improper; there is nothing to prevent the extras from moving against

each other, except the good judgment of the men in charge of them.

*Question Number 1049. Name the errors in the orders?*

ANSWER. One extra has no right that another is bound to respect, unless conferred by train order, except that the extra of superior direction holds the main track at meeting points. An officer, passenger or preferred extra train is superior to other extras not so designated, so far as *passing* them is concerned, but not as to *meeting* them. There are but two ways to prevent opposing extra trains running between the same points from coming together, namely, fixing meeting points for them, or giving one the right over the other, as provided by the rules. An order for one extra to wait until a certain time for another does not mean that if the extra to be waited for cannot make that point by the time named, they must clear the main track for the extra which is directed to wait for them, unless the extra directed to wait has been made superior by train order. One extra train may, of course, be directed to move against another extra under protection of stop signals.

Order No. 2 should read, "Eng 452 will run as a preferred extra E to A with right over Extra 455 West." Afterward, if Order No. 3 were issued, Extra 455 West must be "in to clear" at C or some station between A and C, by 9.55 a. m. As the orders read in Chart No. 64, there is nothing to prevent Extra 455 West from going to C after 10 a. m., and should it make C before or after 10 a. m.,

there is nothing to hold it at such station until Extra 452 East reaches there. The conductor of Extra 455 West should not accept the orders. If Extra 455 were working between C and B until 10 a. m., the movement would then be proper, except that Order No. 1 would not then be issued, and Order No. 3 would refer to a work extra.

## CHART NO. 65.

<p><i>Order No 1.</i> <i>Eng 455 will run extra A to E.</i></p> <p><i>Order No 2.</i> <i>Eng 452 will run extra E to A.</i></p> <p><i>Order No 3.</i> <i>Extra 452 East has right over</i> <i>Extra 455 West E to C.</i></p>
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*Question Number 1050. Under Orders No. 1, No. 2 and No. 3, Chart No. 65, would it be possible for the extras named to collide?*

ANSWER. Yes. Although the "right" order given to Extra 452 East expires at C, it is not for that reason required to take the siding there and wait for Extra 455 West, because it has the same right to run from C to A that Extra 455 has to run from A to C. The extras are not ordered to respect each other between A and C, and Extra 452 East is not held at C for Extra 455 West.

*Question Number 1051. If both extras were to make C for each other, which should take the siding?*

ANSWER. The orders allow both to hold the main track.

*Question Number 1052. How should Order No. 3, then, be worded?*

ANSWER. "Extra 452 East has right over Extra 455 West E to C, and will not pass C until Extra 455 West arrives." Extra 455 West would then take the siding at C, being a train of inferior direction.

*Question Number 1053. Under what circumstances may it be proper to make the movement called for by Order No. 3?*

ANSWER. When Extra 452 East is given running orders only to C.

LECTURE. The conductor of Extra 455 West, before accepting Order No. 3, may satisfy himself that Extra 452 East has orders that will not allow it to pass C until Extra 455 arrives there.

The conductor of Extra 452 East cannot refuse the order at E as he may find Extra 455 West on the siding before reaching C. If, upon their arrival at C, it should be found that no provision has been made for the extras to meet, the dispatcher may be questioned as to his understanding, or in what way he has safeguarded the trains. The dispatcher would be responsible if a collision resulted under the orders.

CHART NO. 66.

*Order No 1.*

*C & E Eng 452 E.*

*C & E Eng 455 A.*

*Eng 455 will run extra A to C and work extra 10 a m until 2 p m between C and D without protecting against extra trains. Eng 452 will run extra E to A and will wait at D until 2 p m for work extra 455.*

*Question Number 1054. Under Order No. 1, Chart No. 66, would it be possible for a collision to occur between the two extras?*

ANSWER. Technically, the order is not sound. It is all right until 2 p. m.; after that Extra 452 East may proceed. If Extra 455 West were to break down at B and should not be able to leave there until 2 p. m., there is nothing to prevent the trains from colliding between B and C, as Extra 455 West has the right to run to C with no limit as to time of arrival. After arriving, it may work between C and D between the hours of 10 a. m. and 2 p. m. If it arrives before 10 a. m. it must not enter the working limits until the "working" order is in effect; nor, of course, could it do so if it arrives at C after the "working" order has expired.

*Question Number 1055. What should the dispatcher have done, and when?*

ANSWER. He should have held Extra 452 East at C for Extra 455 West, before completing Order No. 1. To wait until after he finds that Extra 455 West will not reach C by 2 p. m. would not be safe, as the wires might fail.

*Question Number 1056. If work extra 455 is not found between D and C, should Extra 452 East pass C without definite information concerning it?*

ANSWER. Extra 452 East should ask the dispatcher for instructions before leaving C, explaining that it understands that Extra 452 East is not to wait for Extra 455 West.



## CHART NO. 67.

<p><i>Order No 1.</i> <i>Eng 455 will run extra A to C.</i></p> <p><i>Order No 2.</i> <i>Eng 452 will run extra E to C.</i></p> <p><i>Order No 3.</i> <i>Eng 455 will run extra A to E.</i> <i>Eng 452 will run extra E to A</i> <i>and meet Extra 455 West at C.</i></p>
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*Question Number 1057. Is it proper to run one extra from A to C and another from E to C, as shown by Orders No. 1 and No. 2, Chart 67, without fixing a meeting point between them, depending only upon the limit of their running orders to protect them against each other?*

ANSWER. The practice is objectionable for the reason that either may overlook the fact that their running orders expire at C, and proceed.

LECTURE. This has happened a number of times. If accustomed to receive a short running order part of the time and a "run through" order the rest of the time, the men are apt, in time, to overlook their limits and run without orders. If the dispatcher depends upon such orders to keep extras from colliding, he is not handling them safely. To establish a certain station as dividing the district into two sections and run all extras to that station, but not beyond, is not unsafe, and may be done. It is better, however, to run extras through, if they are to go through, and fix meeting points, as the men, being accustomed to keep such objective points in mind, are likely to pay too little attention to short running orders.

*Question Number 1058. Under Orders No. 1 and No. 2, which extra takes the siding at C?*

ANSWER. Both must take the siding at the initial switches.

*Question Number 1059. If the extras have switching to do at C, in which direction must they protect themselves?*

ANSWER. They must not occupy the main track at all without protecting themselves in both directions, as there may be other extra trains coming to that station from either direction; this, however, leaves but one man to do the work and encourages the men to run risks and not protect their train properly. If given "through" running orders they will not have to protect themselves so often against opposing trains.

*Question Number 1060. Is Order No. 3 faulty?*

ANSWER. No. It shows the correct manner in which opposing extras should be handled.

CHART NO. 68.

<p><b>Order No 1.</b>  <i>C &amp; E No 16 and Extra 452 East C</i>  <i>C &amp; E All Trains E.</i>  <i>C &amp; E Eng 455 A.</i>  <i>Eng 455 will run extra leaving A</i>  <i>on Thursday Feb 17th as follows</i>  <i>with right over all trains.</i></p> <table> <tr> <td>Leave A</td> <td>11 30 p m</td> </tr> <tr> <td>" B</td> <td>12 25 a m</td> </tr> <tr> <td>" C</td> <td>1 47 a m</td> </tr> <tr> <td>" D</td> <td>2 22 a m</td> </tr> <tr> <td>Arrive E</td> <td>3 00 a m</td> </tr> </table> <p><b>Order No 2.</b>  <i>Extra 455 West will run 1 hour</i>  <i>later than time shown in Order</i>  <i>No 1.</i></p>	Leave A	11 30 p m	" B	12 25 a m	" C	1 47 a m	" D	2 22 a m	Arrive E	3 00 a m
Leave A	11 30 p m									
" B	12 25 a m									
" C	1 47 a m									
" D	2 22 a m									
Arrive E	3 00 a m									

*Question Number 1061. Is Order No. 1, Chart No. 68, a supplement to a time-table?*

ANSWER. No.

*Question Number 1062. Under the revised Code rules, can a time-table be supplemented by a train order?*

ANSWER. No.

*Question Number 1063. When an extra is scheduled, does it lose all its rights when twelve hours behind such schedule?*

ANSWER. No; it is in existence until the last station named in the order is reached.

*Question Number 1064. How many minutes must all trains clear a scheduled extra which is given right over them?*

ANSWER. At least five minutes; this includes both regular and extra trains.

*Question Number 1065. May an exception be made of certain regular trains, and if any are excepted, how much must the scheduled extra clear such regular trains?*

ANSWER. An exception may be made of any regular train, and the scheduled extra must in such case clear the regular train five minutes.

*Question Number 1066. What precautions must be taken by the dispatcher to insure that all trains over which the scheduled extra is given right receive a copy of the order?*

ANSWER. He must address the order to all trains that may be on the road; to all trains at the station last named in the order; to all branch trains at

junction stations, if they also run on the main line; and to any train following and likely to pass the extra, should it be delayed.

*Question Number 1067. May the dispatcher complete the order for Extra 455 before he has received the signatures of the conductors of all trains on the road over which the extra is given right?*

ANSWER. No; the trains may be standing at a station and a collision may happen on the main track at such station before the men are aware of the order. It will not do to assume that the trains over which the extra is given right will arrive at stations within a few minutes of the time the order is sent and then to start the extra before signatures are obtained, as trains may break down between stations or wires fail. Signatures of conductors of all trains over which the extra is given right must first be obtained, or the dispatcher must fix meeting points and direct the schedule extra to take the siding at such meeting points.

*Question Number 1068. Is a schedule extra which is given right over all trains required to protect its rear if it stops or is delayed?*

ANSWER. Yes; although it is superior to all trains which it meets or overtakes, a following train may overtake and collide with it.

*Question Number 1069. Are trainmen of any train which is given right over all trains, or over certain trains, thereby relieved from protecting it against following trains?*

ANSWER. Trainmen are not relieved from protecting the rear of their train when another train

may follow. Work extras and trains moving under round-trip orders are not thus required to protect themselves when given right over all trains, as no train may then enter their limits.

FORM H. WORK EXTRA.

Eng ——— will work extra ——— until ———  
between ——— and ———.

EXAMPLE.

(1.) *Eng 292 will work extra 7 a m until 6 p m between Berne and Turin.*

Under (1) the work extra must, whether standing or moving, protect itself within the working limits in both directions as prescribed by Rule 99. The time of regular trains must be cleared.

The working limits should be as short as practicable, to be changed as the progress of the work may require.

The above form may be combined with one similar to the following:

(2.) *Without protecting against eastbound extra trains.*

(3.) *Without protecting against extra trains.*

Under (2) the work extra will protect only against westbound extra trains. The time of regular trains must be cleared.

Under (3) protection against extra trains is not required. The time of regular trains must be cleared.

Extra trains must not be run over working limits without being advised of work extras. When other forms are not applicable, copies of working orders issued for work extras must be furnished extra trains, or notice given in the form:

(4.) *Work extra 292 is between Berne and Turin.*

When a work extra is directed by order not to protect against extra trains, no extra train must be permitted to run over that part of the track without receiving an order to protect itself against the work extra in the following form:

(5.) *Extra 76 will protect against work extra 292 between Lyons and Paris.*

This may be added to the order to run extra.

A work extra when met or overtaken by a train must allow it to pass.

When a work extra has been instructed by order not to protect against extra trains, and afterward it is desired to have such work extra clear the track for (or protect itself after a certain hour against) a designated extra, an order may be given in the following form:

(6.) *Work extra 292 will keep clear of (or protect against) Extra 76 east between Antwerp and Brussels after 2 10 p m.*

In this case, Extra 76 must not pass the westernmost point before 2 10 p. m., at which time the work extra must be out of the way, or protected (as the order may require) between those points.

To enable a work extra to work upon the time of a regular train, the following form may be used:

(7.) *Work extra 292 will protect against No 55 (or all regular trains) between Berne and Turin.*

Under (7) the work extra can work upon the time of the train or trains named in the order, and must protect against such train or trains as prescribed by Rule 99.

The regular train or trains designated must run expecting to find the work extra protecting itself within the limits named.

LECTURE. Attention is particularly called to this form. The rules are not the same as the present Standard Code, but are in line with the Code rules governing work extras on double track. Companies having both single and double track on the same division, or anticipating double track, ought not to adopt the present Code forms for work extra, as they are inconsistent. The single-track Code rules

require work extras to protect against extra trains only when directed by order to do so, while double-track rules require work extras to protect at all times against following extra trains, unless directed by order *not* to do so. This is a dangerous variation, and one that will doubtless soon be corrected by making the rule the same for both single and double tracks.

A careful study of the present Code rules governing work extras on single track will demonstrate that the wording of this part of the Code is cumbersome and not sufficiently exact, since no provision is made for an extra train to keep clear of a work extra when the "working" order delivered to the extra indicates that the work extra is not protecting itself against extra trains. Besides giving extra trains a copy of the work extra's working order, such extra train must also be ordered to protect against the work extra when the work extra is not protecting, notwithstanding the fact that the working order itself clearly indicates that the work extra is not protecting against extra trains.

Instead of requiring the dispatcher to assume all responsibility for instructing work extras to protect against extra trains on single track, why would it not be better practice to provide by rule that work extras must protect themselves against extra trains, unless relieved from this duty by train order, as is provided under the double-track rules?

Under the rules above quoted, work extras must protect at all times in both directions against extra trains within working limits, whether standing or moving, unless directed by order not to do so. They

must keep clear of regular trains at all times unless given right over them, or unless orders are issued permitting them to work on their time, protecting against them. When given an order to protect themselves against overdue regular trains while proceeding to their working limits, they must use every possible precaution in doing so, and must allow such trains to pass as soon as practicable after reaching their working limits. Such an order operates also as a notice to such regular trains that they may find the work extra working against them under protection of stop signals. When a work extra is permitted to work on the time of regular trains, such regular trains must have a copy of the order authorizing the work extra to occupy the main track under protection against them.

The Code Form H for both single and double track will be found below the questions on working orders,\* and, by slightly altering these questions, they can be made to serve in examining upon them, or any other rules that may be adopted governing work trains.

## CHART NO. 69.

*Order No 1.*

*Eng 292 will work extra 7 a m until 6 p m between C and D.*

*Order No 2.*

*Eng 292 will work extra 7 a m until 6 p m between C and D without protecting against eastbound extra trains.*

*Order No 3.*

*Eng 292 will work extra 7 a m until 6 p m between C and D without protecting against extra trains.*

\*See Note following Question Number 1121.



*Question Number 1070. Under Order No. 1, Chart No. 69, what must work extra 292 protect against, and what must it keep clear of?*

ANSWER. It must protect itself within the working limits, in both directions, whether standing or moving, as prescribed by Rule 99; and must keep clear of all regular trains.

*Question Number 1071. Under Order No. 2, what must be understood?*

ANSWER. The work extra must protect itself only against westbound extra trains. The time of regular trains must be cleared.

*Question Number 1072. Under Order No. 3, what may the work extra understand?*

ANSWER. It is relieved from protecting against extra trains, but must keep clear of all regular trains.

#### CHART NO. 70.

<p><i>Order No 1.</i>  <i>Work extra 292 is between C and D.</i></p> <p><i>Order No 2.</i>  <i>Extra 76 will protect against work extra 292 between C and D.</i></p>
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*Question Number 1073. May extra trains be run over working limits without being advised of work extras?*

ANSWER. No.

*Question Number 1074. What form of notice must be used?*

ANSWER. Copies of the "work" orders issued for the work extras must be furnished, when other forms

are not applicable, or an order may be given as shown by Order No. 1, Chart No. 70. This may be added to the extra train's running orders.

*Question Number 1075. If notice is given an extra train that a work extra is between certain stations, must the extra protect against the work extra?*

ANSWER. Not unless the order so directs. Otherwise, it may be understood to be a notice to run over the limits expecting to find the work extra occupying the main track under protection of stop signals.

*Question Number 1076. When a work extra is directed by train order not to protect against extra trains, how may an extra train be permitted to run over that part of the track where the work extra is?*

ANSWER. The extra must be ordered to protect against the work extra as instructed by Order No. 2.

*Question Number 1077. How must extra 76 protect itself when so ordered?*

ANSWER. As prescribed by Rule 99, and in the same manner as if moving without train orders against an overdue first-class train.

*Question Number 1078. If Extra 76 were to receive an order to protect itself against work extra 292, between C and D, and a copy of the working orders showed that the work extra would work from 7 a. m. until 6 p. m., must Extra 76 protect itself against the work extra after the working order has expired?*

ANSWER. No; after 6 p. m. the work extra loses all right.

LECTURE. Either the work extra must be protected or clear the main track; or else trains which are run over its limits must be protected against it. The theory of the rule is that a work extra must not occupy the main track unless all trains which are to run over the limits are advised. Work extras must not occupy the main track under protection, on the time of a regular train, without an order to protect against such regular train; in that event, the regular train should receive notice of the work extra in the form of a copy of the "protecting" order, and then run expecting to be flagged. If the work extra is given time against a regular train, or right over it, instead of a protecting order, it may then occupy the main track on the time of such train without protecting, but must be clear of the main track five minutes or more before the time order expires, as, in that case, the regular train does not always receive notice of the work extra, and so does not run expecting to be flagged by it. If the work extra has been instructed not to protect against extra trains, no extra may be permitted to enter its limits without receiving an order to protect against the work extra.

## CHART NO. 71.

*Order No 1.**Work extra 292 will keep clear of Extra 76 East between C and D after 2 10 p m.**Order No 2.**Work extra 292 will protect against Extra 76 East between C and D after 2 10 p m.*

*Question Number 1079. When a work extra has been instructed by train order not to protect against extra trains, or whenever it is desired to have it clear*

*the track for certain extra trains, what form of order is applicable to keep it clear of the main track?*

ANSWER. Order No. 1, Chart No. 71.

*Question Number 1080. What under that order must be understood by the work extra?*

ANSWER. That it must clear the main track by the time named in the order and *keep clear* until Extra 76 has passed.

*Question Number 1081. What must Extra 76 understand?*

ANSWER. That the order not only requires work extra 292 to be clear of the main track after 2.10 p. m., but also prohibits Extra 76 from entering the working limits before 2.10 p. m. The work extra is not obliged to be clear of the main track or to protect against Extra 76 *before* 2.10 p. m.

*Question Number 1082. When a work extra has been instructed by order not to protect against extra trains and afterward it is necessary to require it to protect against certain extra trains, how must the order be worded?*

ANSWER. As prescribed by Order No. 2.

*Question Number 1083. Under this order, what must work extra 292 understand?*

ANSWER. That it must send out a flagman soon enough for his train to be fully protected by the time named. After 2.10 p. m., it may occupy the main track only under protection of stop signals until Extra 76 arrives.

*Question Number 1084. What must be understood by Extra 76?*

ANSWER. That it must not enter the working limits before 2.10 p. m., and that the work extra is not protecting itself before that time. The order not only operates to put the work extra under protection after 2.10 p. m., but also forbids Extra 76 from entering the working limits before that time. It must run expecting to find the work extra occupying the main track under protection of stop signals after 2.10 p. m.

*Question Number 1085. May the dispatcher issue an order directing work extras to keep clear of, or protect themselves against, several extra trains, and, if necessary, at several different times, in the same order?*

ANSWER. Yes.

CHART NO. 72.

Order No 1. Work extra 292 will protect against No 16 between C and D.
Order No 2. Work extra 292 will protect against all regular trains between C and D.
Order No 3. Work extra 292 will protect against all regular trains, except first-class, between C and D.
Order No 4. Work extra 292 will protect against No 16 between C and D after 2 10 p m.
Order No 5. No 1 will run 1 hour late A to D.
Order No 6. No 16 will run 4 hours late E to A.

*Question Number 1086. What kind of an order is necessary to enable a work extra to work on the time of a regular train?*

ANSWER. One similar to Order No. 1, Chart No. 72.

*Question Number 1087. Under this order, what must the work extra understand?*

ANSWER. That it can work upon the time of the train, or trains, named in the order if it protects itself against such train or trains, as prescribed by Rule 99.

*Question Number 1088. What must such regular trains as the order requires the work extra to protect against, understand?*

ANSWER. That they must run expecting to find the work extra protecting itself and working within the limits named.

*Question Number 1089. Is the work extra required to flag against such trains in going out to work?*

ANSWER. Yes, if they are overdue; unless an order is issued giving it right over them for a certain time.

*Question Number 1090. May an order be given permitting the work extra to protect and work upon the time of all regular trains?*

ANSWER. Yes, if desired. See Order No. 2.

*Question Number 1091. If an exception is made of first-class or other regular trains, as per Order No. 3, what must the work extra do?*

ANSWER. It must clear all regular trains so excepted at least five minutes. /

*Question Number 1092. May a work extra be given Order No. 4, stating that it must protect itself*

*against a certain regular train after a certain time, and may it understand that before that time it may work on the time of such train without protecting itself against it?*

ANSWER. Such an order is not allowed under the rules; such form is to be used only in the case of extra trains, and to apply it to regular trains would create confusion.

LECTURE. The exact meaning of an order worded like Order No. 4, is that before 2.10 p. m. the work extra must keep clear of the regular train designated, if it is due before that time, and that after 2.10 p. m. it may protect itself and work upon the regular train's time.

*Question Number 1093. When, on account of wire trouble, it is impossible to get "working" or "protecting" orders, may a work extra flag itself out to its work and remain until driven in, if good judgment is used as to working if upon the time of fast trains and it protects itself absolutely as prescribed by Rule 99?*

ANSWER. Yes; otherwise, a large gang of men might have to remain idle.

*Question Number 1094. If, after receiving an order to protect against regular trains, a work extra would be delayed by flagging out to its work, how may the dispatcher help it?*

ANSWER. He should give it a time order over such trains if possible to do so, allowing sufficient time to enable the work extra to reach its work without having to follow a flagman.

*Question Number 1095. If such order cannot be issued, what must the work extra do?*

ANSWER. It must proceed to its working limits following a flagman.

*Question Number 1096. Under Order No. 5, must the work extra also have an order to protect against No. 1, and must No. 1 be advised of the work extra?*

ANSWER. The order simply makes No. 1's timetable one hour later; work extra may occupy the main track against No. 1 until fifty-five minutes late, without also receiving an order to protect against it. It is not necessary to advise No. 1 of the work extra.

*Question Number 1097. A work extra is between C and D; it has Order No. 5 and is about a fourth of a mile East of D; No. 1 has twenty-five minutes' time between C and D, but can run from C to D in ten minutes; must the work extra be clear of the main track, between C and D, when No. 1 is fifty-five minutes late leaving C, or when it is fifty-five minutes late arriving at D?*

ANSWER. It must be on a siding, clear of the main track, when No. 1 is fifty-five minutes late leaving C.

*Question Number 1098. When a work extra is given a part of a regular train's time, may it move against such train as well as ahead of it?*

ANSWER. Yes; the time order, in effect, simply changes such train's time-table time.

*Question Number 1099. If a work extra received Order No. 6, what must be understood, if*



*such working orders, which would expire before No. 16 is four hours late, are extended? May it, while working under the extended working orders, also make use of Order No. 6 until train No. 16 is four hours late?*

ANSWER. When a work extra's working orders expire, all other orders it may hold become void and must not be again used. When another working order is issued for it, it becomes a new train and must have all its orders reissued.

*Question Number 1100. May the dispatcher then give the work extra the four hours against No. 16, making it the same order as before?*

ANSWER. Yes, by completing it at the same time or after the new working orders are issued. In case of meeting orders, they must be also reissued and all trains affected must be given new copies, together with a copy of the new working order if other trains are concerned as to that part of the movement.

*Question Number 1101. May the dispatcher issue an order reading, "The working limits of work extra 292 are extended to E and the time is extended to 10 p m"?*

ANSWER. The former working order should be annulled and another issued covering the territory and time desired. It is not necessary to handle the matter otherwise, and to do so is likely to mislead the work extra and give it the impression that all of its former orders remain in effect, while other trains may not so understand it.

## CHART NO. 73.

<p><i>Order No 1.</i>  <i>All eastbound trains will wait at D until 10 a m for work-extra 292.</i></p> <hr/> <p><i>Order No 2.</i>  <i>C &amp; E Extra 76 West B.</i>  <i>C &amp; E Eng 292 D.</i>  <i>Eng 292 will work extra 7 a m until 10 a m between D and B without protecting against extra trains. Extra 76 West will meet work-extra 292 at C.</i></p>
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*Question Number 1102. Under Order No. 1, Chart No. 73, what must be understood by the work extra and all eastbound trains?*

ANSWER. No eastbound train, regular or extra, may pass D until 10 a. m., unless work extra 292 is there. The work extra may work until 9.55 a. m., without protecting against eastbound trains.

*Question Number 1103. Under Order No. 2, if work extra 292 fails to arrive at C by 10 a. m., may Extra 76 proceed?*

ANSWER. The order is then void, as the train which they are directed to meet has lost right.

*Question Number 1104. May the dispatcher renew the work extra's "working" orders under such circumstances?*

ANSWER. Not without first holding Extra 76 and issuing it a copy of the new working order, or instructing the work extra to keep clear of Extra 76.

*Question Number 1105. If the work extra gets a new working order after 10 a. m., and no mention is made of Extra 76, what should it do before acting under it?*

ANSWER. It should question the dispatcher as to his understanding, explaining that it understands that under the new orders the work extra may disregard Extra 76, as the work extra is a new train.

*Question Number 1106. If an extra were to receive an order to protect against a work extra between certain limits and does not find the work extra within those limits, what is required of the extra when it reaches the station at the farther end of such limits?*

ANSWER. The order having been fulfilled, the extra may proceed, disregarding the work extra.

*Question Number 1107. In the absence of orders permitting them to occupy the main track against regular trains, how many minutes must work extras clear all regular trains?*

ANSWER. At least five minutes.

*Question Number 1108. What should be the length of working limits?*

ANSWER. They should be as short as practicable.

*Question Number 1109. When possible, should work extras be kept under protection of stop signals?*

ANSWER. It is safer to so order, giving them, however, time enough against other trains to allow them to reach their work without having to follow a flagman; otherwise it would be possible for a dispatcher to overlook them and allow other extra trains to run over their limits without protecting, or an emergency might arise, such as a wreck, mak-

ing it necessary to run an extra over the work extra's limits without delaying it to protect against the work extra.

*Question Number 1110. When a work extra is met or overtaken by a train, must it allow it to pass?*

ANSWER. It should do so and not hold such trains unnecessarily.

*Question Number 1111. Where do working limits begin at stations?*

ANSWER. At the initial switches.

*Question Number 1112. If it is desired to work on the main track at C, must the work extra have limits between B and D?*

ANSWER. Yes; as then, if not protecting itself and no regular trains are due, or the work extra has right over them, it may occupy the main track at C without protecting.

*Question Number 1113. Should it be necessary to take an engine off an extra to work for a few hours, must the extra's running orders be annulled before it is given an order to work?*

ANSWER. Yes, and when through work, the working orders should be annulled, if in effect, and new running orders issued. An extra's running orders may be annulled and reissued at any time.

*Question Number 1114. If the dispatcher wishes to give the engine of a regular train a working order, is it necessary to first annul such regular train?*

ANSWER. No. The engine may be given a working order and when through work the working

order may be annulled, if it has not expired, and, as the regular train has not been annulled it may proceed without further orders.

*Question Number 1115. Must such work extra protect against the regular train, of which its crew was in charge before receiving the order to work?*

ANSWER. If it works in advance of such train it must either protect against it or receive "right" over it.

*Question Number 1116. If given an order at C to work extra between C and D, may such work extra take with it the cars of its former (regular) train and resume its schedule at D after its work is finished, without a train order to again run as such regular train?*

ANSWER. No; it must report at C and take up its schedule there. It must not abandon it at C and assume it at D, thus leaving an unused space between stations. If the train comes to D, an order must be obtained to run; it must not leave such station on a clearance card, message, or on mere verbal understanding.

*Question Number 1117. If the dispatcher wishes to restrict the superiority of such regular train, must he address an order to it, notwithstanding its crew is on a work train for the time being, and where must he address the order to such regular train?*

ANSWER. He must address the order to the regular train at the point where it must again resume its schedule. The fact that the crew is temporarily

on a work train does not prevent such crew from proceeding as a regular train at any time, from the last point it had reached on its schedule. The dispatcher should not move opposing inferior trains farther than D against such regular train without first getting an acknowledgment from the conductor who is working and who will, when through work, again run the regular train from C. He must never depend upon the regular crew's reporting at C and allow inferior opposing trains to move from D to C against it before receiving acknowledgment from the superior regular train, unless its crew is working between C and D under protection of stop signals.

*Question Number 1118. If a work extra is sent to another part of the road without annulling its working orders, may it be returned to the working limits and be allowed to again use the working order?*

ANSWER. The working order has not been superseded; but to avoid confusion, it should be annulled when the train is sent to another part of the road.

*Question Number 1119. If a work extra holds orders to work all day between C and D and it is necessary to send its engine a few miles outside of the working limits for water, or for other good reasons, must the working order be annulled, the engine then run extra and, upon its return, a new working order be issued?*

ANSWER. When practicable this course should be pursued. If impracticable, there can be no

serious objection to the work extra resuming work upon the return of the engine. Its former working orders were not made void by the engine leaving the working limits.

*Question Number 1120. If there is an extra at B running toward D and an engine at B which is needed to work between B and D, may the dispatcher, after the extra has left B, issue an order for the engine to work between B and D without protecting against extra trains and without instructing such work extra not to pass the extra running toward D, should it be overtaken at some siding between B and D?*

ANSWER. If the work extra is not required to protect itself against extra trains it could pass the extra at C and afterward return toward C and collide with it. The dispatcher must anticipate the possibility of a collision under such orders and direct the work extra not to pass the extra which left B ahead of it.

*Question Number 1121. How should dispatchers show work extras on their train sheet?*

ANSWER. They should write in the train and crew as other extras are recorded and, in addition, draw a circle around the stations between which the work extra is working, showing its engine number, whether or not such work extra is protecting itself, and the time limit of its working order. This prevents the possibility of a work extra being overlooked when extra trains report for running orders over its limits.

NOTE.—Standard Code Form H, and D Form H, for single and double track, read as follows:

FORM H. WORK EXTRA.

(1.) Work extra ——— will work ——— until ——— between ——— and ———.

EXAMPLES.

(1.) *Work extra 292 will work 7 a m until 6 p m between Berne and Turin.*

The working limits should be as short as practicable, to be changed as the progress of the work may require. The above may be combined, thus:

(a.) *Work extra 292 will run Berne to Turin and work 7 a m until 6 p m between Turin and Rome.*

When an order has been given to "work" between designated points, no other extra shall be authorized to run over that part of the track without provision for passing the work extra.

When it is anticipated that a work extra may be where it cannot be reached for orders, it may be directed to report for orders at a given time and place, or an order may be given that it shall clear the track for (or protect itself after a certain hour against) a designated extra by adding to (1) the following words:

(b.) *And will keep clear of (or protect against) Extra 223 south between Antwerp and Brussels after 2 10 p m.*

In this case, extra 223 must not pass the northernmost point before 2 10 p.m., at which time the work extra must be out of the way, or protected (as the order may require) between those points.

When the movement of an extra over the working limits cannot be anticipated by these or other orders to the work extra, an order must be given to such extra, to protect itself against the work extra, in the following form:

(c.) *Extra 76 will protect against work extra 95 between Lyons and Paris.*

This may be added to the order to run extra.

A work extra when met or overtaken by an extra must allow it to pass.

When it is desirable that a work extra shall at all times protect itself while on working limits, it may be done by adding to (1) the following words:



*(d.) protecting itself.*

A train receiving this order must, whether standing or moving, protect itself within the working limits in both directions in the manner prescribed by Rule 99.

Whenever an extra is given orders to run over working limits it must at the same time be given a copy of the order sent to the work extra.

To enable a work extra to work upon the time of a regular train, the following form may be used:

*(e.) Work extra 292 will protect against No 55 between Berne and Turin.*

A train receiving this order will work upon the time of the train mentioned in the order, and protect itself against it as prescribed by Rule 99.

The regular train receiving this order must run, expecting to find the work extra protecting itself within the limits named.

## D-FORM H. WORK EXTRA.

Eng ——— will work extra ——— until ——— between  
—— and ——.

## EXAMPLE.

*Eng 292 will work extra 7 a m until 6 p m between Berne and Turin.*

This form of order must be combined with one of the following additions:

(1.) *"On (eastward) track."*

*"On (westward) track."*

*"On (eastward and westward) track."*

Under (1) the work extra will protect on the track or tracks named as prescribed by Rule D-99. The time of regular trains must be cleared.

(2.) *"On (eastward) track without protecting against extra trains."*

*"On (westward) track without protecting against extra trains."*

*"On (eastward and westward) track without protecting against extra trains."*

Under (2) protection against extra trains will not be required. The time of regular trains must be cleared.

(3.) "Protecting against (No 1) or all regular trains."

Under (3) the work extra can work upon the time of the train or trains named in the order, and must protect against such train or trains as prescribed by Rule D-99.

(4.) "Protecting against trains moving against the current of traffic on \_\_\_\_\_ track."

Under (4) protection must be given against trains which may be moving against the current of traffic on the track or tracks named.

FORM J. HOLDING ORDER.

Hold \_\_\_\_\_ at \_\_\_\_\_.

EXAMPLES.

(1.) *Hold No 2 at Berlin.*

(2.) *Hold all eastbound trains at Berlin.*

This order will be addressed to the operator and acknowledged in the usual manner. It must be respected by conductors and enginemen of trains thereby directed to be held as if addressed to them.

When a train has been so held it must not proceed until the order to hold is annulled, or an order given to the operator in the form:

"No 2 may go."

Form J will only be used when necessary to hold trains until orders can be given, or in case of emergency.

CHART NO. 74.

<p>Order No 1. Opr C. Hold No 2 at C.</p> <p>Order No 2. Opr C. Hold all eastbound trains at C.</p>
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*Question Number 1122. When it is desired to hold a train until orders can be given, or in cases of emergency, to whom must such holding orders be addressed?*

ANSWER. They should be addressed to the operator, as shown by Orders No. 1 and No. 2, Chart No. 74.

*Question Number 1123. Which form should be used?*

ANSWER. Form "31."

*Question Number 1124. Must conductors and enginemen of trains directed to be held sign such orders?*

ANSWER. They are signed only by the operator.

*Question Number 1125. Must the operator deliver copies of the holding orders to trains which he is directed to hold?*

ANSWER. There is no objection to his doing so; technically, however, it is not required. He shows the order as his authority for displaying the order signal at "stop."

*Question Number 1126. When a holding order has been shown or delivered to a conductor or engineman of a train directed to be held, how should they regard it?*

ANSWER. They must respect it the same as if it were addressed to them, and understand that their train is held.

CHART NO. 75.

<p>Order No 10. Opr C. Order No 1 is annulled.</p> <hr/> <p>Order No 15. Opr C. No 2 may go.</p>
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*Question Number 1127. When an order is issued to an operator to hold a train, what must be issued to release such train?*

ANSWER. Either an order annulling the holding order, or, in case the order reads to hold all trains in one or both directions, an order may be issued reading, "No. . . . . may go"; as indicated by Orders No. 10 and No. 15, Chart No. 75.

*Question Number 1128. To whom is the releasing order addressed?*

ANSWER. To the operator.

*Question Number 1129. Which would be the proper form to use?*

ANSWER. There is no objection to Form "19" being used.

*Question Number 1130. Must operators deliver copies of the annulment of the holding order, or the order, "No. . . . . may go," to the trains which are thus released?*

ANSWER. It would be proper for him to do so; the trainmen and enginemen of the train directed to be held would then have something to show that they have been released. The rules do not require it, however,—simply prescribing that the release be shown to conductors affected by the holding orders.

*Question Number 1131. If, after showing a train an order directing him to hold it or to hold all trains, the operator delivers such train an order and a clearance card, or delivers an order and restores his train-order signal to "proceed," may the train un-*

*derstand that it is thereby released from the holding order?*

ANSWER. No.

*Question Number 1132. What must be delivered to such train before it may proceed?*

ANSWER. The operator must deliver all the orders he received for such train, together with the annulment of the holding order, and change the order signal to "proceed." Or, if he has an order to hold all trains and receives an order reading, "No. . . . . may go," he must deliver this order with any other orders he may have and also a clearance card, as, in that case, the order signal would be still displayed to hold other trains, and while "stop" is indicated trains must not proceed without a clearance card.

NOTE.—If desired, the train directed to be held may be simply shown the annulment of the holding order, or the one reading, "No. . . . . may go."

#### CHART NO. 76.

<p><i>Order No 1.</i>  19—Opr C.  19—C &amp; E No 2 E.  19—C &amp; E Ex 455 West B.  No 2 will meet Extra 455 West at C.</p> <p><i>Order No 2.</i>  31—Opr and C &amp; E No 15 C.  19—C &amp; E No 16 and Ex 452 East D.  19—C &amp; E Ex 455 West A.  No 15 and Extra 455 West will meet  No 16 and Extra 452 East at C  instead of D.  No 1 will run 2 hours late A to E.</p>
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*Question Number 1133. If an order be issued for train No. 2, as per Order No. 1, Chart No. 76, and the operator at E fails to deliver it, must No. 2*

*understand that it is held at C for Extra 455 West, even though it gets no further notice until it arrives at C and is there given the order addressed only to the operator?*

ANSWER. Yes. An order addressed to an operator, holding a train, must be accepted and respected by conductors and enginemen the same as if it were addressed to their train. This is in the interest of safety, and to enable a "19" order to be issued for the superior as well as the inferior train.

*Question Number 1134. Should there be a failure in delivery of Order No. 2 to Extra 455 West at A, must it accept the operator's copy at C and wait there for No. 16 and Extra 452 East, it being understood that Extra 455 West still holds a previously issued order to meet these trains at D, a station farther on?*

ANSWER. Extra 455 West must accept the order and wait at C for No. 16 and Extra 452 East.

*Question Number 1135. The order also states that No. 1 will run two hours late; may Extra 455 West use the time?*

ANSWER. No; that would confer "right" upon the extra. Right cannot be conferred upon a train by an order addressed to an operator; such orders must be addressed to the train. Orders addressed only to operators must not be acted upon except as holding orders.

FORM K. ANNULING A REGULAR TRAIN.

- (1.) \_\_\_\_\_ of \_\_\_\_\_ is annulled \_\_\_\_\_ to \_\_\_\_\_.  
 (2.) \_\_\_\_\_ due to leave \_\_\_\_\_ \_\_\_\_\_ is annulled  
 \_\_\_\_\_ to \_\_\_\_\_.

## EXAMPLES.

(1.) *No 1 of Feb 29th is annulled Alaska to Halifax.*

(2.) *No 3 due to leave Naples Saturday Feb 29th is annulled Alaska to Halifax.*

The train annulled loses both right and class between the stations named, and must not be restored under its original number between those stations.

## CHART NO. 77.

<p><i>Order No 1.</i> <i>No 1 of Feb 29th is annulled A to E.</i></p> <p><i>Order No 2.</i> <i>No 3 due to leave A Saturday Feb 29th is annulled C to E.</i></p> <p><i>Order No 3.</i> <i>No 15 of Feb 27th has arrived at C and is annulled C to E.</i></p>
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*Question Number 1136. Two forms are provided for annulling trains; are both proper?*

ANSWER. Yes. When a train runs over an entire district on one date, Order No. 1, Chart No. 77, is the proper form to use. If due to leave one terminal on one date and due to arrive at the other on the next day, Order No. 2 is to be used.

*Question Number 1137. What is there wrong with Order No. 3, No. 15 being due to leave its initial station at 10 p. m., due at C at 1 a. m., and due to arrive at the next district terminal at 4 a. m.?*

ANSWER. It is misleading and may be understood to annul No. 15 of a different date. It should read, "No 15 due to leave A Saturday Feb 27th, has arrived at C and is annulled C to E."

*Question Number 1138. When a train is annulled, can it be restored?*

ANSWER. No.

*Question Number 1139. Is the schedule affected outside of the limits between which it is annulled?*

ANSWER. No.

*Question Number 1140. If a conductor runs several trains during the day, must he have the annulment order given to him for each trip?*

ANSWER. Not unless he has an engineman who has not received a copy.

*Question Number 1141. Should a train be delayed at a blind siding for a regular train and some other train arrive there holding an order annulling such regular train, may the delayed train take a copy of the annulment order from the arriving train and then proceed, or must the order be addressed to the train which is at the blind siding?*

ANSWER. The rules do not allow an order conferring right to be acted upon by a train to which the order is not addressed, but in the case of an annulment, an accident could not result if the train which was being delayed were to act on the order received by another train.

CHART NO. 78,

<p><i>Order No 1.</i>  <i>No 1 of Feb 29th is annulled C to D.</i></p> <p><i>Order No 2.</i>  <i>Eng 90 is annulled as 2d No 1 C to D.</i></p>
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*Question Number 1142. If train No. 1 received order to run extra from C to D, could it proceed from D as No. 1 without train-order authority?*

ANSWER. No.

*Question Number 1143. If Order No. 2 were issued to 1st No. 1 at C, what must it do?*

ANSWER. Take down the signals for a following train.

*Question Number 1144. Must it display them again at D?*

ANSWER. Not without an order to do so. The dispatcher probably had in mind a movement where signals were to be taken down at C for one engine and put up at D for another.

*Question Number 1145. If 2d No. 1 were to receive Order No. 2, should it understand that it could run extra from C to D and proceed from that point as 2d No. 1.*

ANSWER. Not without an order to do so.

*Question Number 1146. If desired, may the dispatcher instruct No. 1 to again display signals from D for Engine 90, or for any other engine?*

ANSWER. Yes.

*Question Number 1147. Should an extra train be annulled by its engine number, or by annulling the order which created it?*

ANSWER. Preferably by its engine number, thus: "Extra 455 West is annulled from C." There is risk in annulling a train by cancelling its "running" order, as such order may not agree with the number in the dispatcher's record book. When

only a "running" order is in effect for an extra there can be no objection to taking away from the extra all its right by annulling such order; but if other trains are concerned in the movement, and several orders are in effect referring to the extra, much extra labor would be entailed in making void all orders or parts of orders pertaining to the several movements. To make the movement by annulling the extra outright, would require but one order and is in conformity with Form K.

#### FORM L. ANNULING AN ORDER.

"Order No ——— is annulled."

If an order which is to be annulled has not been delivered to a train, the annulling order will be addressed to the operator, who will destroy all copies of the order annulled but his own, and write on that:  
*Annulled by Order No ———.*

#### EXAMPLE.

*Order No 10 is annulled.*

An order which has been annulled must not be reissued under its original number.

In annulling an order, acknowledgment must be obtained from the train to which right was given by the order annulled, before it is completed for other trains.

**NOTE.**—In the Code this rule reads:

"In the address of an order annulling another order, the train first named must be that to which right was given by the order annulled, and when the order is not transmitted simultaneously to all concerned, it must be first sent to the point at which that train is to receive it and the required response made, before the order is sent for other trains."

The language of this paragraph seems to embrace more than the Train Rule Committee intended, and, if complied with literally, might result in accident. For instance, if No. 1 were given an order at A to meet No.

2 at C, and should meet with delay and it be decided to annul such order, it would be unsafe to simply first send the annulling order to No. 1 at B and then allow No. 2 to act on it, as there would be nothing to prevent No. 2 from passing B against No. 1. In such case, acknowledgment must be obtained from the train that was made superior by the order which is annulled, before it is completed for other trains.

*Question Number 1148. If an order which is to be annulled has not been delivered to a train, to whom must the order of annulment be addressed?*

ANSWER. To the operator, who will destroy all copies of the order annulled, except his own, and write on that:

“Annulled by Order No. . . . .”

*Question Number 1149. If delivered to a train, what precautions must be taken?*

ANSWER. The train to which right was given by the order annulled must acknowledge the order before it is completed for other trains, even when the train to which right was given is standing at the station where the annulling order is issued for it. If signatures cannot be obtained from trains to which right was given, the dispatcher must not annul the order, or must take steps necessary to prevent an accident, until signatures are obtained.

*Question Number 1150. May an order, or a part of an order, which has been annulled, be reissued under its original number?*

ANSWER. No.

*Question Number 1151. If a train were to receive an order reading, “Order No. 20 is annulled,”*

*and it has not received Order No. 20, must it be furnished a copy?*

ANSWER. It is contended by some that, since the order is annulled, the contents of such order is of no interest to trains which have not been given a copy. This reasoning seems unsafe. The train may be moving under Orders No. 21 and No. 22, and upon receipt of an order stating that Order No. 20 is annulled, it may properly insist that such order be delivered to it so that it may be compared with the other orders under which it is moving.

#### FORM M. ANNULING PART OF AN ORDER.

That part of Order No ——— reading ——— is annulled.

#### EXAMPLE.

*That part of Order No 10 reading No 1 will meet No 2 at Sparta is annulled.*

In annulling a part of an order, acknowledgment must be obtained from the train to which right was given by the part annulled, before it is completed for other trains.

NOTE.—In the Code this clause reads:

“In the address of an order annulling a part of an order, the train first named must be that to which right was given by the part annulled, and when the order is not transmitted simultaneously to all concerned, it must be first sent to the point at which that train is to receive it, and the required response made, before the order is sent for other trains.”

*Question Number 1152. May a part of an order be annulled without in any way affecting the rest of it?*

ANSWER. Yes.

*Question Number 1153. In annulling a part of an order, from whom must acknowledgment be first obtained?*

ANSWER. From the train to which right was given by the part of the order annulled.

*Question Number 1154. When an order contains several movements and it is desired to annul a part of such order, may the dispatcher say, "Order No. 15, reading No 2 will meet Extra 455 West at C, is annulled"?*

ANSWER. That would be misleading and might create the impression that the entire order was annulled. It must read, "That part of Order No. 15 reading No 2 will meet Extra 455 West at B, is annulled."

#### FORM P. SUPERSEDING AN ORDER OR A PART OF AN ORDER.

This order will be given by adding to prescribed forms the words "instead of \_\_\_\_\_."

(1.) \_\_\_\_\_ will meet \_\_\_\_\_ at \_\_\_\_\_ instead of \_\_\_\_\_.

(2.) \_\_\_\_\_ has right over \_\_\_\_\_ \_\_\_\_\_ to \_\_\_\_\_ instead of \_\_\_\_\_.

(3.) \_\_\_\_\_ will display signals for \_\_\_\_\_ \_\_\_\_\_ to \_\_\_\_\_ instead of \_\_\_\_\_.

#### EXAMPLES.

(1.) *No 1 will meet No 2 at Hong Kong instead of Bombay.*

(2.) *No 1 has right over No 2 Mecca to Medina instead of Mirbat.*

(3.) *No 1 will display signals for Eng 85 Astrakhan to Teheran instead of Cabul.*

An order which has been superseded must not be reissued under its original number.

## CHART NO. 79.

<p><i>Order No 1.</i> <i>No 1 will meet No 2 at B instead of C.</i></p> <p><i>Order No 2.</i> <i>No 1 will meet No 2 at B instead of C and</i> <i>No 4 at D.</i></p> <p><i>Order No 3.</i> <i>No 1 has right over No 4 D to E instead of</i> <i>meeting at D.</i></p>
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*Question Number 1155. How must orders be superseded?*

ANSWER. By adding to the prescribed forms the words "instead of."

*Question Number 1156. May one order ever be understood to supersede another unless worded as required by Form P?*

ANSWER. No.

*Question Number 1157. May an order be issued reading, "This supersedes Order No . . . . ."?*

ANSWER. Not under the revised Standard Code rules.

*Question Number 1158. May an order which has been superseded be reissued under its original number?*

ANSWER. No.

*Question Number 1159. Under Order No. 1, Chart No. 79, where does No. 1 meet No. 2?*

ANSWER. At B.

*Question Number 1160. Under what circumstances should Order No. 3 be issued?*

ANSWER. When an order has been issued direct-

*and meet Extra 452 East at B; or must it be given new running orders?*

ANSWER. It is not necessary to issue new running orders. But, if "instead of A" had been added to Order No. 2, the movement would have been made clearer.

NOTE.—In addition to the subjects covered by the foregoing examination, persons who are examined should be questioned as to how signals must be displayed on the front and rear of trains, as prescribed by the Standard Diagrams, and the meaning of fixed signals in their several positions.

## **GENERAL RULES.\***

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- A. Employees whose duties are prescribed by these rules must provide themselves with a copy.
- B. Employees must be conversant with and obey the rules and special instructions. If in doubt as to their meaning, they must apply to proper authority for an explanation.
- C. Employees must pass the required examinations.
- D. Persons employed in any service on trains are subject to the rules and special instructions.
- E. Employees must render every assistance in their power in carrying out the rules and special instructions.
- F. Any violation of the rules or special instructions must be reported.
- G. The use of intoxicants by employes while on duty is prohibited. Their habitual use, or the frequenting of places where they are sold, is sufficient cause for dismissal.
- H. The use of tobacco by employes when on duty in or about passenger stations, or on passenger cars, is prohibited.
- J. Employees on duty must wear the prescribed badge and uniform and be neat in appearance.

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\* The first eleven of these rules—A to L, inclusive, are Standard Code Rules; the remainder, Numbers 700, 736, etc., are not standard but are recommended supplementary rules.



- K. Persons authorized to transact business at stations or on trains must be orderly and avoid annoyance to passengers.
- L. In case of danger to the company's property, employes must unite to protect it.
700. The general direction and government of a train is vested in the conductor. He is responsible for its safe and proper conduct, and all men employed on the train will obey his instructions. Should there be any doubt as to authority or safety of proceeding, from any cause, he must consult the engineman and be equally responsible with him for the safety and proper handling of the train, and for such use of signals and other precautions as the case may require. He must be vigilant and cautious, not trusting alone to signals or rules for safety; must obey the instructions of yard masters within yard limits, and be governed by the directions of agents in doing work at stations; and must conform to the instructions issued by the passenger, freight and accounting departments.
736. When conductors or enginemen change off before completing their trip, they must exchange any train orders or instructions they may have, and each must know that his train orders or instructions are perfectly understood by the other; the conductor or engineman changing must compare the train orders or instructions he receives with those in the hands of the conductor or engineman of the train to which he exchanges, before proceeding.
737. Accidents, detentions, failures in supply of water or fuel, fires, rapidly rising or swollen streams, sliding embankments or cuts, heavy rain or snow, or defects in track, bridges or equipment, liable to cause accident or obstruction, must be promptly reported by telegraph to the superintendent, and, when practicable and necessary, to the nearest section or bridge foreman. When necessary, proper signals must be used to stop trains. When there is reason to believe that

the safety of the track or any structure is endangered through flood, fire or other causes, every employe, before attempting its use, must make a personal inspection, using all precautions in the interest of life and property.

738. Bridge and section foremen, track walkers and watchmen must observe trains closely, and, if anything dangerous is noted, such as defective coupling, brake-rod or brake-beam dragging, or if trains are running too closely together, in violation of Rule 91, must call attention of trainmen and enginemen to the fact, by signal. Trainmen and enginemen should always observe trackmen, bridgemen and other employes as they pass, and look out for signals from them.
739. In emergencies, or obstruction by accident or other cause, suggestions based on observation of the actual situation are useful and required, and frequent report of progress must be made. Prompt action is insisted upon, and in the absence of designation the employe upon whom the responsibility most naturally falls will assume authority.
740. In case of accident, the conductor may call on any employe for assistance.
742. In case of damage to trains or structures, wherein the security of property or freight is involved, it is the duty of all concerned to see that watchmen are immediately stationed, and that arrangements are promptly made for the protection of such property against thieving or loss from other causes.
743. To avoid damage to track and bridges, great care must be exercised in the movement of engines not having main or side rods in place; they must not be forwarded until after full understanding with the Superintendent, and they must be in charge of a competent man, who must frequently advise the conductor as to their condition.

When handled in freight trains, steam shovels,

rotary snow excavators, derricks, pile drivers, gun-truck cars, and cars upon which are loaded heavy or long girders, or other heavy freight, must be moved at a speed that is perfectly safe.

744. Branch trains must clear the main line immediately on arrival at junction station, pulling in on branch track at initial switch. In the opposite direction, they must not occupy main line until after station work is done and they are ready to leave.

Such trains must be protected, as prescribed in Rule 99, against main-line trains while doing work at junction stations.

748. Cars must not be left on the main track unless protected as prescribed by Rule 99.

Under no circumstances may cars or engines be left within the boundaries of any street crossing or public highway.

There must be sufficient clearance between cars left on side tracks, and tracks adjoining, to prevent injury to persons who may be on the sides of the cars.

When cars are left, hand brakes must invariably be applied, and if on a grade where they may start by gravity, the wheels must also be securely blocked.

749. If a switch is found to have a defective lock, it must be properly secured and report made at once to the Superintendent.
751. Employes authorizing slow orders must indicate speed that is safe, and instructions will be issued accordingly. Speed indicated must not be exceeded.
753. Every person accepting service will be deemed to have full knowledge of the dangers and risks incident to the service, unless such person gives notice of his inexperience and demands instruction. He agrees to exercise due care in the performance of his duties to prevent accident to himself or others, and, before using them, to see that the machinery, tools and appliances are in a safe condition to perform the service required.

Employes are not required nor expected to pursue a dangerous practice in the performance of their duties, nor use defective appliances of any character.

754. No employe may assume that signals given enginemen or firemen have been seen, and if seen will be obeyed—when obedience to those signals on the part of the enginemen or firemen is essential to the safety of an employe in the performance of his duty. He must know that the signal has been seen, understood and obeyed, before placing himself in a dangerous position—otherwise, without such knowledge, he assumes all risks of danger arising from any misunderstanding or disregard of signals.
755. All employes must inform themselves respecting the location of tunnels, bridges, snow sheds, buildings, stock yards, switches, overhead wires or other obstructions or structures along the line which will not clear them when on the top or sides of cars.
757. Employes must not go between cars in motion to couple or uncouple them, or follow other dangerous practices. Under no circumstances must they stand on the track and attempt to get on cars or engines approaching them.
759. Employes must not remain near the track when trains are passing, as coal, stone, car doors or other articles are liable to fall from the train. On double track, employes must stand outside and clear of both tracks while trains are passing. All employes are further warned that they must not rely on others to notify them of the approach of an engine or train, but must themselves keep a proper lookout.
760. All persons whose duty it may be to handle cars on coal chute or incline tracks are required to personally familiarize themselves as to condition of brakes on cars before same are moved for any purpose. All cars placed on the coal chute tracks, or incline track approaching the coal chutes, when left by employes or others, must have the hand brakes securely set and the wheels of cars securely blocked.

772. No person who is deficient in hearing, visual power or color perception will be employed in any branch of the service where the use of signals or the movement of trains is involved.
903. Before starting on a trip, conductor must have the current time-table for every part of the road to be covered by such trip, and must see that his train and enginemen are likewise provided. If a new time-table is to take effect during the trip, this provision must also include the requisite copies of such time-table. He must compare time with enginemen before starting, and with brakeman, flagman and baggagemen as soon thereafter as practicable.
906. Conductors must enter in train-register book, wherever kept, all information called for. Trains not scheduled to stop at registering points will be registered by operator. Conductor will leave train registering ticket.
929. Should a train-order signal be located at or outside of the switch which it governs, trains must stop clear of such switch if "stop" is indicated, until it is ascertained whether such trains are restricted at that station for trains in the opposite direction.
931. Conductor must accompany and remain with his train until it has stopped clear of the main track, or he is otherwise properly relieved, at the end of his run.
973. It is the duty of conductors to attend to the safety and comfort of passengers lawfully on their trains and to protect them against rudeness, threatened violence, assault, abusive, profane or obscene language or conduct. Any passenger thus acting should be promptly ejected, whether at or between stations, but not at such a place as will endanger his life or personal safety, and with only sufficient force for the purpose.
1002. Freight conductors must see that their crews are so distributed over the train as to control it most effectually and to be able to pass signals from any part of

it to the engineman. In cold or inclement weather they may allow their men to ride in the caboose or on the engine, so far as is consistent with safety, but in descending long grades, approaching and passing railroad crossings, stations, and other points where train may be required to stop, brakemen must all be in proper positions on top of the train.

1008. Conductors must see that cars loaded with explosives, oil, hay, straw, or other inflammable material (and when practicable stock cars bedded with straw), are placed in train at least ten cars from the engine, as a protection against fire. When there are enough cars in train to permit, explosives must also be placed at least ten cars from caboose. Passenger equipment must be handled in rear part of freight trains.

1151. It is the especial duty of flagmen to protect the rear of their trains in accordance with the rules, and they must allow nothing to interfere with the prompt and efficient discharge of this duty.

Flagmen must obey the signal from the engineman, prescribed by the rules, but never wait for signal or for instructions from the conductor when their train needs protection.

1159. Flagmen must closely observe fixed signals and train signals; must read train orders, keep them in mind, and, should there be occasion to do so, remind the conductor.

1161. The proper position for a flagman, when train is in motion, is in the rear of the last car in the train, except that when a private car is on the rear of the train he must ride in the front of such car, unless the observation end be ahead, when he will ride in the rear end, if it be unoccupied; but will always take such position therein as not to remain with or disturb the occupants, unless it is unavoidable.

1173. In the absence or disability of a flagman, brakemen and train porters must perform this service. Protection being paramount, nothing must be allowed to in-

terfere with the prompt and efficient discharge of this duty.

1174. The front brakeman or train porter must have the necessary signal appliances at hand and ready for use, and be prepared to protect the front of the train, when necessary.
1175. They must also closely observe fixed signals and train signals; read train orders, keep them in mind, and, should there be occasion to do so, remind the conductor.
1227. When there is no conductor, or when the conductor is disabled, the engineman will, unless otherwise directed, have charge of the train and will be governed by the rules prescribed for conductors. When there is more than one engine, the senior engineman will assume these duties.
1241. Enginemen must be alert in all matters pertaining to safety, and when it becomes evident that the rear of train requires protection, they must immediately sound whistle signal for flagman to protect, and, if necessary, repeat the signal until protection is assured.
1242. Engines must be supplied with flag, lamp, torpedo and fusee signals, and enginemen must know that their firemen are conversant with and properly understand the application of rules relating to protection of trains.
1243. While running by night, they must have in cab, where it cannot be seen by passing trains, a red light, with sufficient torpedoes attached thereto, and, in case of danger, signal approaching trains. Enginemen must keep in mind the number and location of switches at each point, so as to know before reaching them whether all are lighted; and if any are not, reduce speed until track is known to be clear. Report all such failures.

1263. Enginemen must know their time on the road, and will not start from a station, even though they receive a signal from the conductor, unless they can reach the next station in time to properly clear superior trains.

They will take into consideration that the lives of passengers and trainmen, as well as the property of the Company, are entrusted to their care, and it is fully expected and required that they will not only attend to all signals and all instructions, but also that they will, on all occasions, be vigilant and cautious themselves, not trusting alone to signals or rules for safety.

1278. Firemen must closely observe fixed signals and train signals; read train orders, keep them in mind, and, should there be occasion to do so, remind the engineer.

1455. A transfer, consisting of record of outstanding train orders, all overdue trains and undelivered messages must be made by the operator going off duty to the relieving operator.

1458. When there are indications of heavy winds, agents and operators must see at once that cars are so secured that they will not move and obstruct the main track.

1463. Operators must provide themselves with proper signals for stopping trains, and will keep such signals in order and ready for immediate use. Signal lamps must be trimmed and filled before sunset each day. A supply of torpedoes and red fusees must be kept in a convenient place.

When they have orders for a train during heavy sleet or snow storms, or dense fog, in addition to the fixed signal, operators must place one torpedo on the rail, 700 feet from train-order signal, in one or both directions as circumstances may require. When, from rain, fog, or snow, torpedoes may become impaired, one must be placed upon each rail, opposite, to insure the explosion of at least one of them.



1464. At night offices, a red light must be kept burning to use should the train-order signal fail to work properly.
1484. Operators must have standard time and current time tables, and must carefully read and observe the rules for agents, trainmen and enginemen, and other employes, so far as they relate in any way to the proper discharge of their duties.
1625. Before changing rails, or in any way rendering the track impassable, foremen must see that stop signals for the protection of the work are placed in the hands of reliable men (and they must remain in their hands) at points at least thirty telegraph poles in each direction from the impassable point. In addition to the flag or light, one torpedo must be placed on the rail at a point four telegraph poles beyond the flagman. On double track, as well as single track, stop-signals must be placed as above in both directions. Foremen must keep well supplied with signals, such as torpedoes, flags and lanterns.
- When from fog, rain or snow, torpedoes may become impaired, one must be placed upon each rail, opposite to insure the explosion of at least one of them. Torpedoes that are exploded or damaged by push or hand-cars must be replaced.
1626. When sectionmen are working between an extra gang and the latter's flag or flagman, a caution flag should be placed in the center of the track about one hundred feet beyond the sectionmen and between them and the extra gang, to warn approaching trains that there is another gang at work.
1627. When one gang passes another at work, it will be the duty of such passing gang to ascertain what signals are out, and govern themselves accordingly.
1642. Section foremen must personally inspect all main-line switches once each day, or have some competent man do so. When making such inspection, they must

try the switch to see that it works all right, and be absolutely certain that every switch is in a safe condition.

1644. Bridge or section foremen must never throw a switch for a trainman. When switches are to be thrown for loaded push-cars, it must be done only under the personal supervision of the foreman, and the switch must be immediately returned to its proper position. They must see that all switches not in service at gravel pits and other points are locked and spiked. In case it becomes necessary to spike a switch which is in service, the Superintendent must be advised by wire as soon as practicable, and also must be notified when the switch is ready for use.

### APPENDIX.

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Form A.			
The .....		Railroad Company.	
<b>CLEARANCE CARD.</b>			
Dover, .....	9 15 A. M. ....	March 25, .....	190 .....
Conductor and Engineman .....		No. 12 .....	
I have no ..... (further) ..... orders for your train.			
This does not interfere with or countermand any orders you may have received.			
.....		John Jones,	
.....		Operator.	
Conductor and Engineman must each have a copy, and see that their train is correctly designated in the above form.			

(To be printed on yellow paper, card 5¼ in. wide, 3¼ in. high.)

NOTE.—It is not necessary to have clearance cards indicate what the train-order signal is displayed for; all that train or engine men care to know is whether or not there are orders, or further orders, for their train.

Some companies require operators to endorse on clearance cards the numbers of all orders which they deliver with clearance cards. The practice is not approved by the Train Rule Committee, but there can be no serious objection to it, if handled properly,

<b>FORM 19</b>	<b>THE..... RAILWAY CO.</b>	<b>FORM 19</b>
<i>Train Order No.</i> ..... <sup>10</sup> .....		March 27, .....1904
<i>To</i> ..... .....		
<i>At</i> ..... <div style="text-align: center;"><i>Station.</i></div>		<div style="text-align: right;">(Initials) 1 45 A.</div> <i>X</i> ..... <i>Opr.</i> ..... <i>M.</i>
<p style="text-align: center;">.....</p> <p style="text-align: center;">Conductor and Engineman must each have a copy of this order.</p>		
<hr/> <div style="display: flex; justify-content: space-between;"> <span><i>Made</i></span> <span><i>Complete</i></span> <span><i>Time</i></span> <span>2 16 A. M.</span> <span><i>Black</i></span> <span><i>Opr.</i></span> </div> <hr/>		

(To be printed on green manifold paper; form 6¼ in. wide, 6 in. high.)

**NOTE.**—A slight change has been made in the “19” and “31” forms; those proposed by the Train Rule Committee are impracticable, for the reason that there is not space enough provided for the several addresses.

FORM 31	THE..... RAILWAY CO.	FORM 31		
Train Order No. <u>10</u> .....				
March 27, 1902				
To .....				
.....				
At.....	(Initials)	1 45 A.		
Station.	X.....	Opr;.....M.		
.....				
Conductor and Engineman must each have a copy of this order.				
.....				
2 20 A.				
Repeated at.....M.				
CONDUCTOR	TRAIN	MADE	AT	RECEIVED BY
Jones,	45	Complete	2 20 A M	Black.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

(To be printed on yellow manifold paper; form 6 $\frac{3}{4}$  in. wide, 9 $\frac{1}{4}$  in. high.)

**THE \_\_\_\_\_ RAILWAY CO.**

**Application for and Record of Examination.**

Date.....190..

Where employed, Division or Station.....

1. What is your name in full, age, present occupation, and what experience have you had in Railroad service?

ANSWER: My name is.....Age.....  
Present occupation is....., and have had.....  
years experience in Railroad service, in the capacities and on  
the roads below stated.

NAME OF ROADS	OCCUPATION	NO. OF YEARS

2. Have you a copy of the Rules and Regulations of the Operating Department of this Railway Company, effective .....

ANSWER: ..... Produce said copy for verification by examiner.

3. Have you studied carefully said rules and particularly those pertaining to the duties of a.....?

ANSWER: .....

4. Do you thoroughly understand them, and are you now prepared to be examined on said rules?

ANSWER: .....

5. Do you promise and agree that during your employment you will obey and conform to these rules and regulations?

ANSWER: .....

I certify that I have personally read the above questions and answers, and that all things therein stated are true.

Signed.....

NOTE.—The above must be filled out and signed in the presence of the examiner.

This is to certify that the above named.....  
has been thoroughly examined as to his possession of, acquaint-  
ance with, and clear and correct understanding of the Rules  
and Regulations of the Operating Department of this Railway  
Company, effective ..... and has been found to  
be.....for the position of.....

Remarks: .....

Certificate No..... Issued.....190..

Signed.....

Examiner.

Form 51.

THE.....RY. Co.

No.....

Date .....190..

Name .....

Position .....

Examined by.....

The Company's  
Trade Mark  
may be  
shown here.

THE.....RAILWAY COMPANY.

**CERTIFICATE OF EXAMINATION.**

No.....190....

**THIS IS TO CERTIFY, that Mr.....**  
**has been examined upon the RULES AND REGULATIONS OF THE OPERAT-**  
**ING DEPARTMENT, and is qualified to fill the position of.....**  
.....

**Signature of holder:** ..... **Examiner.**  
.....  
**(STAMP) Approved:** .....  
.....

.....  
**Superintendent.**







Form 54.

**THE RAILWAY COMPANY.**

Register of Trains ARRIVED at..... Station.....190....

Train	Road	Engine	Signals	Time Arrived	Cars				Tons	Conductor	Caboose	Engineman
					Pass.	Stock	D. F.	Empties				

(Form 12 in. wide.)

Register of Trains DEPARTED from..... Station.....190....

Train	Road	Engine	Signals	Time Departed	Cars				Tons	Conductor	Caboose	Engineman
					Pass.	Stock	D. F.	Empties				

(Form 12 in. wide.)



Form 56.

## TRAIN REGISTERING TICKET.

.....Station .....190.  
 .....Section Train No. ....Eng.....Displaying.....Signals  
 Arrived.....M., Departed.....M.  
 Stock.....Dead Freight.....Empties.....Tons.....  
 Mail.....Bags.....Coach.. ..Diner.....Sleeper.....Spl. ....

.....Conductor.  
 Conductors will fill out and leave one of these tickets at designated telegraph  
 stations, and as required by Rule 906.

(Form 5½ in. wide, 2½ in. high.)



Form 58.

THE ..... RAILWAY CO.

Cars in Train ..... Date ..... 190..

Conductor .....

A	Fruit	Routed via
B	Mail	
C	M. B. & E.	
D	Bag. and Exp.	
F	Coaches	
G	Chair	
H	Sleepers	
J	Tourists	
K	Diners	
M	Parlor	
N	Bage. and Couch	
Q	Observation	
S	Special	
U		
W		
X	Total	

Remarks .....

NOTE.—Under Remarks, give number of deadhead equipment room in coaches for passengers; cars that can be spared; number of pieces of baggage, etc.

(Form 4 in. wide, 9 in. high.)



**THE  
STANDARD CODE  
OF  
THE AMERICAN RAILWAY ASSOCIATION.**

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**TRAIN RULES  
FOR  
SINGLE TRACK.**

ADOPTED APRIL 12, 1889;  
WITH AMENDMENTS AGREED TO APRIL 24, 1901,  
AND APRIL 23, 1902.

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**STANDARD TIME.**

1. Standard Time obtained from \_\_\_\_\_ observatory will be telegraphed to all points from designated offices at \_\_\_\_\_, \_\_\_\_\_ m. daily.

NOTE TO RULE 1.—In order to detect possible errors at junction points and to secure uniformity, the Committee recommends that the time be disseminated to all points at the same hour. The Committee considers it of great importance that the time be obtained from some observatory of recognized standing.

2. Watches that have been examined and certified to by a designated inspector must be used by conductors and enginemen. The certificate in prescribed form must be renewed and filed with \_\_\_\_\_ every \_\_\_\_\_.

*(Form of Certificate.)*

**CERTIFICATE OF WATCH INSPECTOR.**

This is to certify that on.....19....  
the watch of.....  
employed as.....  
on the.....R.....  
was examined by me. It is correct and reliable, and in  
my judgment will, with proper care, run within a variation  
of thirty seconds per week.

Name of Maker.....  
Brand .....  
Number of Movement.....  
Open or hunting case.....  
Metal of case.....  
Stem or key winding.....

Signed,

.....  
*Inspector.*

Address .....



3. Watches of conductors and enginemen must be compared, before starting on each trip, with a clock designated as a Standard Clock. The time when watches are compared must be registered on a prescribed form.

NOTE TO RULE 3.—The conditions under which conductors and enginemen whose duties preclude access to a standard clock are required to obtain standard time, vary so much on different roads that the Committee recommends that each adopt such regulations to cover the case supplementary to this rule, as may best suit its own requirements.

#### TIME-TABLES.

4 (A). Each time-table, from the moment it takes effect, supersedes the preceding time-table.

A train of the preceding time-table thereupon loses both right and class, and can thereafter proceed only by train order.

No train of the new time-table shall run on any division until it is due to start from its initial station, on that division, after the time-table takes effect.

4 (B). Each time-table, from the moment it takes effect, supersedes the preceding time-table. A train of the preceding time-table shall retain its train orders and take the schedule of the train of the same number on the new time-table.

A train of the new time-table which has not the same number on the preceding time-table shall not run on any division until it is due to start from its initial station, on that division, after the time-table takes effect.

NOTE TO RULES 4 (A) AND 4 (B).—The Committee has recommended two forms of Rule 4, leaving it discretionary with each road to adopt either, as best suits its own requirements.

5. Not more than two times are given for a train at any station; where one is given, it is, unless otherwise indicated, the leaving time; where two, they are the arriving and leaving time.

Unless otherwise indicated, the time applies to the switch where an inferior train enters the siding; where there is no siding it applies to the place from which fixed signals are operated; where there is neither siding nor fixed signal, it applies to the place where traffic is received or discharged.

Schedule meeting or passing points are indicated by figures in full-faced type.

Both the arriving and leaving time of a train are in full-faced type when both are meeting or passing times, or when one or more trains are to meet or pass it between those times.

When a train takes a siding, extending between two adjoining telegraph stations, to be passed by one or more trains, the time at each end of the siding will be shown in full-faced type.

Where there are one or more trains to meet or pass a train between two times, or more than one train to meet a train at any station, attention is called to it by \_\_\_\_\_.

**NOTE TO RULE 5.**—The Committee recommends that each company adopt such method as it may prefer in filling the blank.

6. The following signs when placed before the figures of the schedule indicate:

“s”—regular stop:

“f”—flag stop to receive or discharge passengers or freight:

“m”—stop for meals:

“l”—leave:

“a”—arrive.

#### SIGNAL RULES.

7. Employes whose duties may require them to give signals must provide themselves with the proper appliances, keep them in good order and ready for immediate use.

8. Flags of the prescribed color must be used by day, and lamps of the prescribed color by night.

9. Night signals are to be displayed from sunset to sunrise. When weather or other conditions obscure day signals, night signals must be used in addition.

## VISIBLE SIGNALS.

## 10. COLOR SIGNALS.

COLOR.	INDICATION.
(a) Red.	Stop.
(b) ———	Proceed, and for other uses prescribed by the Rules.
(c) ———	Proceed with caution, and for other uses prescribed by the Rules.
(d) Green and white.	Flag stop. See Rule 28.
(e) Blue.	See Rule 26.

NOTE TO RULE 10.—The Committee has omitted giving the colors of signals (b) and (c) in Rule 10, leaving it discretionary with each road to use such colors as it may prefer.

11. A fusee on or near the track burning red must not be passed until burned out. When burning green it is a caution signal.

## 12. HAND, FLAG AND LAMP SIGNALS.

MANNER OF USING.	INDICATION.
(a) Swung across the track.	Stop.
(b) Raised and lowered vertically.	Proceed.
(c) Swung vertically in a circle across the track, when the train is standing.	} Back.
(d) Swung vertically in a circle at arm's length across the track, when the train is running.	
(e) Swung horizontally in a circle, when the train is standing.	} Train has parted.
(f) Held at arm's length above the head, when train is standing.	
	} Apply air brakes.
	} Release air brakes.

13. Any object waved violently by any one on or near the track is a signal to stop.

## AUDIBLE SIGNALS.

## 14. ENGINE STEAM WHISTLE SIGNALS.

NOTE.—The signals prescribed are illustrated by "o" for short sounds; "—" for longer sounds. The sound of the whistle should be distinct, with intensity and duration proportionate to the distance signal is to be conveyed.

SOUND.	INDICATION.
(a) o	Stop. Apply brakes.
(b) — —	Release brakes.
(c) — o o o	Flagman go back and protect rear of train.
(d) — — — —	Flagman return from west or south.
(e) — — — — —	Flagman return from east or north.
(f) — — — —	When running, train parted; to be repeated until answered by the signal prescribed by Rule 12 (d). Answer to 12 (d).
(g) o o	Answer to any signal not otherwise provided for.
(h) o o o	When train is standing, back. Answer to 12 (e) and 16 (e).
(j) o o o o	Call for signals.
(k) — o o	To call the attention of trains of the same or inferior class to signals displayed for a following section.
(l) — — o o	Approaching public crossings at grade.
(m) — — — —	Approaching stations, junctions and railroad crossings at grade.

A succession of short sounds of the whistle is an alarm for persons or cattle on the track, and calls the attention of trainmen to danger ahead.

15. The explosion of one torpedo is a signal to stop; the explosion of two not more than 200 feet apart is a signal to reduce speed, and look out for a stop signal.

## 16. . . . RIGHTS OF TRAINS ON SINGLE TRACK.

### 16. AIR-WHISTLE OR BELL-CORD SIGNALS.

SOUND.	INDICATION.
(a) Two.	When train is standing, start.
(b) Two.	When train is running, stop at once.
(c) Three.	When train is standing, back the train.
(d) Three.	When train is running, stop at next station.
(e) Four.	When train is standing, apply or release air brakes.
(f) Four.	When train is running, reduce speed.
(g) Five.	When train is standing, call in flagman.
(h) Five.	When train is running, increase speed.

### TRAIN SIGNALS.

17. The head-light will be displayed to the front of every train by night, but must be concealed when a train turns out to meet another and has stopped clear of main track, or is standing to meet trains at the end of double track or at junctions.

18. Yard engines will display the head-light to the front and rear by night. When not provided with a head-light at the rear, two white lights must be displayed. Yard engines will not display markers.

19. The following signals will be displayed, one on each side of the rear of every train as markers to indicate the rear of the train: By day, a green flag. By night, a green light to the front and side and a red light to the rear, except when the train turns out to be passed by another and is clear of main track, when a green light must be displayed to the front, side and to rear.

20. All sections of a train, except the last, will display two green flags and, in addition, two green lights by night, in the places provided for that purpose on the front of the engine.

21. Extra trains will display two white flags and, in addition, two white lights by night, in the places provided for that purpose on the front of the engine.

22. When two or more engines are coupled to a train, the leading engine only shall display the signals as prescribed by Rules 20 and 21.

23. One flag or light displayed where in Rules 19, 20 and 21 two are prescribed will indicate the same as two; but the proper display of all train signals is required.

24. When cars are pushed by an engine (except when shifting or making up trains in yards) a white light must be displayed on the front of the leading car by night.

25. Each car on a passenger train must be connected with the engine by a communicating signal appliance.

26. A blue flag by day and a blue light by night, displayed at one or both ends of an engine, car or train, indicates that workmen are under or about it. When thus protected it must not be coupled to or moved. Workmen will display the blue signals and the same workmen are alone authorized to remove them. Other cars must not be placed on the same track so as to intercept the view of the blue signals, without first notifying the workmen.

#### USE OF SIGNALS.

27. A signal imperfectly displayed, or the absence of a signal at a place where a signal is usually shown, must be regarded as a stop signal, and the fact reported to the ———.

28. The combined green and white signal is to be used to stop a train only at the flag stations indicated on the schedule of that train. When it is necessary to stop a train at a point that is not a flag station for that train, a red signal must be used.

29. When a signal (except a fixed signal) is given to stop a train, it must be acknowledged as prescribed by Rule 14 (g).

30. The engine-bell must be rung when an engine is about to move.

31. The engine-bell must be rung on approaching every public road crossing at grade, and until it is passed; and the whistle must be sounded at all whistling-posts.

32. The unnecessary use of either the whistle or the bell is prohibited. They will be used only as prescribed by rule or law, or to prevent accident.

33. Watchmen stationed at public road and street crossings must use red signals only when necessary to stop trains.

## CLASSIFICATION OF TRAINS.

81. Trains of the first class are superior to those of the second; trains of the second class are superior to those of the third; and so on. Extra trains are inferior to regular trains.

All trains in the direction specified in the time-table are superior to trains of the same class in the opposite direction.

82. Regular trains twelve hours behind their schedule time lose both right and class, and can thereafter proceed only by train order.

## MOVEMENT OF TRAINS.

83. A train must not leave its initial station on any division, or a junction, or pass from double to single track, until it has been ascertained whether all trains due, which are superior, or of the same class, have arrived or left.

84. A train leaving its initial station on each division, or leaving a junction, when a train of the same class in the same direction is overdue, will proceed on its schedule, and the overdue train will run as prescribed by Rule 91.

85. A train must not start until the proper signal is given.

86. An inferior train must keep out of the way of a superior train.

87. A train failing to clear the main track by the time required by rule, must be protected as prescribed by Rule 99.

88. At meeting points between trains of the same class the inferior train must clear the main track before the leaving time of the superior train, and must pull into siding when practicable. If necessary to back in, the train must first be protected, as prescribed by Rule 99, unless otherwise provided.

89. At meeting points between trains of different classes the inferior train must take the siding and clear the superior when practicable. If necessary to back in, the train must first be protected as prescribed by Rule 99, unless otherwise provided.

An inferior train must keep at least five minutes off the time of a superior train in the same direction.

NOTE TO RULES NOS. 88 AND 89.—The Committee recommends that where greater clearance is necessary, Rule 88 should require a clearance of FIVE minutes, and Rule No. 89 of TEN minutes.

90. Trains must stop at schedule meeting or passing stations, if the train to be met or passed is of the same class, unless the switches are right and the track clear. Trains should stop clear of the switch used by the train to be met or passed in going on the siding.

When the expected train of the same class is not found at the schedule meeting or passing station, the superior train must approach all sidings prepared to stop, until the expected train is met or passed.

91. Unless some form of block signals is used, trains in the same direction must keep at least five minutes apart, except in closing up at stations.

NOTE TO RULE 91.—The Committee recommends that where greater clearance is necessary, Rule No. 91 should allow a clearance of TEN minutes or more.

92. A train must not arrive at a station in advance of its schedule arriving time.

A train must not leave a station in advance of its schedule leaving time.

93. A regular train which is delayed, and falls back on the time of another train of the same class, will proceed on its own schedule.

94. A train which overtakes a superior train or a train of the same class, so disabled that it cannot proceed will pass it, if practicable, and if necessary will assume the schedule and take the train orders of the disabled train, proceed to the next open telegraph office, and there report to the ——. The disabled train will assume the schedule and take the train orders of the last train with which it has exchanged, and will when able proceed to and report from the next open telegraph office.

95. A train must not display signals for a following section, nor an extra train be run, without orders from the ——.

96. When signals displayed for a section are taken down at any point before that section arrives, the conductor will, if there be no other provision, arrange with the operator, or if there be no operator, with the switchtender, or in the absence of both, with a flagman left there for the purpose, to notify all opposing trains of the same or inferior class leaving such point that the section for which the signals were displayed has not arrived.

97. Work extras will be assigned working limits.

98. Trains must approach the end of double track, junctions, railroad crossings at grade, and drawbridges, pre-



pared to stop, unless the switches and signals are right and the track is clear. Where required by law, trains must stop.

99. When a train stops or is delayed, under circumstances in which it may be overtaken by another train, the flagman must go back immediately with stop signals a sufficient distance to insure full protection. When recalled he may return to his train, first placing two torpedoes on the rail when the conditions require it.

The front of a train must be protected in the same way, when necessary, by the ———.

100. When the flagman goes back to protect the rear of his train, the ——— must, in the case of passenger trains, and the next brakeman in the case of other trains, take his place on the train.

101. If a train should part while in motion, trainmen must, if possible, prevent damage to the detached portions. The signals prescribed by Rules 12 (d) and 14 (f) must be given, and the front portion of the train kept in motion until the detached portion is stopped.

The front portion will then go back, to recover the detached portion, running with caution and following a flagman. The detached portion must not be moved or passed until the front portion comes back.

102. When cars are pushed by an engine (except when shifting and making up trains in yards) a flagman must take a conspicuous position on the front of the leading car and signal the engineman in case of need.

103. Messages or orders respecting the movement of trains or the condition of track or bridges must be in writing.

104. Switches must be left in proper position after having been used. Conductors are responsible for the position of the switches used by them and their trainmen, except where switchtenders are stationed.

A switch must not be left open for a following train unless in charge of a trainman of such train.

105. Both conductors and enginemen are responsible for the safety of their trains, and, under conditions not provided for by the rules, must take every precaution for their protection.

106. In all cases of doubt or uncertainty the safe course must be taken and no risks run.

**SINGLE TRACK.  
RULES  
FOR  
MOVEMENT BY TRAIN ORDERS.  
201 TO 223.**

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**RULES FOR MOVEMENT BY TRAIN ORDERS.**

201. For movements not provided for by time-table, train orders will be issued by authority and over the signature of the ——. They must contain neither information nor instructions not essential to such movements.

They must be brief and clear; in the prescribed forms when applicable; and without erasure, alteration or interlineation.

202. Each train order must be given in the same words to all persons or trains addressed.

203. Train orders will be numbered consecutively each day, beginning with No. — at midnight.

204. Train orders must be addressed to those who are to execute them, naming the place at which each is to receive his copy. Those for a train must be addressed to the conductor and engineman, and also to any one who acts as its pilot. A copy for each person addressed must be supplied by the operator.

205. Each train order must be written in full in a book provided for the purpose at the office of the —; and with it recorded the names of those who have signed for the order; the time and the signals which show when and from what offices the order was repeated and the responses transmitted; and the train dispatcher's initials. These records must be made at once, and never from memory or memoranda.

206. Regular trains will be designated in train orders by their numbers, as "No 10," or "2d No 10," adding engine numbers if desired; extra trains by engine numbers, as "Extra 798," with the direction when necessary, as "East" or "West." Other numbers and time will be stated in figures only.

207. To transmit a train order, the signal "31" or the signal "19" must be given to each office addressed, the number of copies being stated, if more or less than three—thus, "31 copy 5," or "19 copy 2."

NOTE TO RULE 207.—Where forms "31" and "19" are not both in use the signal may be omitted.

208. A train order to be sent to two or more offices must be transmitted simultaneously to as many of them as practicable. The several addresses must be in the order of superiority of trains, each office taking its proper address. When not sent simultaneously to all, the order must be sent first to the superior train.

209. Operators receiving train orders must write them in manifold during transmission, and if they cannot at one writing make the requisite number of copies, must trace others from one of the copies first made.

210. When a "31" train order has been transmitted, operators must (unless otherwise directed) repeat it at once from the manifold copy in the succession in which the several offices have been addressed, and then write the time of repetition on the order. Each operator receiving the order should observe whether the others repeat correctly.

Those to whom the order is addressed, except engineers, must then sign it, and the operator will send their signatures, preceded by the number of the order, to the ——. The response "complete," and the time, with the initials of the —, will then be given by the train dispatcher. Each operator receiving this response will then write on each copy the word "complete," the time, and his last name in full, and then deliver a copy to each person addressed, except engineers. The copy for each engineer must be delivered to him personally by —.

NOTE TO RULE 210.—The blanks in the above rule may be filled for each road to suit its own requirements. On roads where the signature of the engineer is desired, the words "except engineers," and the last sentence in the second paragraph may be omitted. If preferred, each person receiving an order may be required to read it aloud to the operator.

211. When a "19" train order has been transmitted, operators must (unless otherwise directed) repeat it at once from the manifold copy, in the succession in which the several offices have been addressed. Each operator receiving the order should observe whether the others repeat correctly. When the order has been repeated correctly by an operator, the response "complete," and the time, with the initials of the —, will be given by the train dispatcher. The operator receiving this response will then write on each copy the word "complete," the time, and his last name in full, and personally deliver a copy to each person addressed without taking his signature.

212. A train order may, when so directed by the train dispatcher, be acknowledged without repeating, by the operator responding: "X; \_\_\_\_\_ (Number of Train Order.) \_\_\_\_\_ to (Train Number.)" with the operator's initials and office signal. The operator must then write on the order his initials and the time.

213. "Complete" must not be given to a train order for delivery to an inferior train until the order has been repeated or the "X" response sent by the operator who receives the order for the superior train.

214. When a train order has been repeated or "X" response sent, and before "complete" has been given, the order must be treated as a holding order for the train addressed, but must not be otherwise acted on until "complete" has been given.

If the line fails before an office has repeated an order or has sent the "X" response, the order at that office is of no effect and must be there treated as if it had not been sent.

215. The operator who receives and delivers a train order must preserve the lowest copy.

216. For train orders delivered by the train dispatcher the requirements as to the record and delivery are the same as at other offices.

Such orders shall be first written in manifold so as to leave an impression in the record book, from which transmission shall be made.

217. A train order to be delivered to a train at a point not a telegraph station, or at one at which the telegraph office is closed, must be addressed to

*"C. and E. — (at —), care of —,"*

and forwarded and delivered by the conductor or other person in whose care it is addressed. When form 31 is used "complete" will be given upon the signature of the person by whom the order is to be delivered, who must be supplied with copies for the conductor and engineman addressed, and a copy upon which he shall take their signatures. This copy he must deliver to the first operator accessible, who must preserve it, and at once transmit the signatures of the conductor and engineman to the train dispatcher.

Orders so delivered must be acted on as if "complete" had been given in the usual way.

For orders which are sent, in the manner herein provided, to a train, the superiority of which is thereby re-

stricted, "complete" must not be given to an inferior train until the signatures of the conductor and engineman of the superior train have been sent to the —.

218. When a train is named in a train order, all its sections are included unless particular sections are specified, and each section included must have copies addressed and delivered to it.

219. Unless otherwise directed, an operator must not repeat or give the "X" response to a train order for a train, the engine of which has passed his train-order signal, until he has ascertained that the conductor and engineman have been notified that he has orders for them.

220. Train orders once in effect continue so until fulfilled, superseded or annulled. Any part of an order specifying a particular movement may be either superseded or annulled.

Orders held by or issued for a regular train become void when such train loses both right and class as prescribed by Rules 4 and 82, or is annulled.

221 (A): A fixed signal must be used at each train-order office, which shall indicate "stop" when there is an operator on duty, except when changed to "proceed" to allow a train to pass after getting train orders, or for which there are no orders. A train must not pass the signal while "stop" is indicated. The signal must be returned to "stop" as soon as a train has passed. It must be fastened at "proceed" only when no operator is on duty.

Operators must have the proper appliances for hand signalling ready for immediate use if the fixed signal should fail to work properly. If a signal is not displayed at a night office, trains which have not been notified must stop and ascertain the cause, and report the facts to the — from the next open telegraph office.

Where the semaphore is used, the arm indicates "stop" when horizontal and "proceed" when in an inclined position.

NOTE TO RULE 221 (A).—The conditions which affect trains at stations vary so much that it is recommended each road adopt such regulations supplementary to this rule as may best suit its own requirements.

221 (B). A fixed signal must be used at each train-order office, which shall indicate "stop" when trains are to be stopped for train orders. When there are no orders the signal must indicate "proceed."

When an operator receives the signal "31," or "19," he must immediately display the "stop signal" and then reply

"stop displayed"; and until the orders have been delivered or annulled the signal must not be restored to "proceed." While "stop" is indicated trains must not proceed without a clearance card [Form — (A)].

Operators must have the proper appliances for hand signalling ready for immediate use if the fixed signal should fail to work properly. If a signal is not displayed at a night office, trains which have not been notified must stop and ascertain the cause, and report the facts to the — from the next open telegraph office.

Where the semaphore is used, the arm indicates "stop" when horizontal and "proceed" when in an inclined position.

**NOTE TO RULES 221 (A) AND 221 (B).**—The Committee has recommended two forms of Rule 221, leaving it discretionary to adopt one or both of these forms according to the circumstances of the traffic.

222. Operators will promptly record and report to the — the time of departure of all trains and the direction of extra trains. They will record the time of arrival of trains and report it when so directed.

223. The following signs and abbreviations may be used:

Initials for signature of the —.

Such office and other signals as are arranged by the —.

C & E—for Conductor and Engineman.

X—Train will be held until order is made "complete."

Com—for Complete.

O S—Train Report.

No—for Number.

Eng—for Engine.

Sec—for Section.

Psgr—for Passenger .

Frt—for Freight.

Mins—for Minutes.

Jct—for Junction.

Dispr—for Train Dispatcher.

Opr—for Operator.

31 or 19—to clear the line for Train Orders, and for

Operators to ask for Train Orders.

S D—for "Stop Displayed."

The usual abbreviations for the names of the months and stations.

**GENERAL NOTE.**—Blanks in the rules may be filled by each road to suit its own organization or requirements,

## FORMS OF TRAIN ORDERS.

## FORM A. FIXING MEETING POINTS FOR OPPOSING TRAINS.

- (1.) — will meet — at —.
- (2.) — will meet — at — — at — (and so on).

## EXAMPLES.

(1.) *No 1 will meet No 2 at Bombay.*

*No 3 will meet 2d No 4 at Stam.*

*No 5 will meet Extra 95 at Hong Kong.*

*Extra 652 North will meet Extra 231 South at Yokohama.*

(2.) *No 1 will meet No 2 at Bombay 2d No 4 at Stam and Extra 95 at Hong Kong.*

Trains receiving these orders will run with respect to each other to the designated points and there meet in the manner provided by the Rules.

## FORM B. DIRECTING A TRAIN TO PASS OR RUN AHEAD OF ANOTHER TRAIN.

- (1.) — will pass — at —.
- (2.) — will pass — when overtaken.
- (3.) — will run ahead of — to —.
- (4.) — will pass — at — and run ahead of — to —.

## EXAMPLES.

(1.) *No 1 will pass No 3 at Khartoum.*

(2.) *No 6 will pass No 4 when overtaken.*

(3.) *Extra 594 will run ahead of No 6 Bengal to Madras.*

(4.) *No 1 will pass No 3 at Khartoum and run ahead of No 7 Madras to Bengal.*

When under (1) a train is to pass another, both trains will run according to rule to the designated point and there arrange for the rear train to pass promptly.

Under (2), both trains will run according to rule until the second-named train is overtaken and then arrange for the rear train to pass promptly.

Under (3), the second-named train must not exceed the speed of the first-named train between the points designated.

**FORM C. GIVING A TRAIN THE RIGHT OVER AN  
OPPOSING TRAIN.**

— has right over — — to —.

**EXAMPLES.**

(1.) *No 1 has right over No 2 Mecca to Mirbat.*

(2.) *Extra 37 has right over No 3 Natal to Ratlam.*

This order gives the train first named the right over the other train between the points named.

If the trains meet at either of the designated points, the first-named train must take the siding, unless the order otherwise prescribes.

Under (1), if the second-named train reaches the point last named before the other arrives it may proceed, keeping clear of the opposing train as many minutes as such train was before required to clear it under the Rules.

If the second-named train, before meeting, reaches a point within or beyond the limits named in the order, the conductor must stop the other train where it is met and inform it of his arrival.

Under (2), the regular train must not go beyond the point last named until the extra train has arrived.

When the extra train has reached the point last named the order is fulfilled.

The following modification of this form of order will be applicable for giving a work extra the right over all trains in case of emergency:

(3.) *Work extra — has right over all trains between — and — from —m to —m.*

**EXAMPLE.**

*Work extra 275 has right over all trains between Stockholm and Edinburg from 7 p m to 12 midnight.*

This gives the work extra the exclusive right between the points designated between the times named.

**FORM D. GIVING REGULAR TRAINS THE RIGHT  
OVER A GIVEN TRAIN.**

Regular trains have right over — between — and —.

**EXAMPLE.**

*Regular trains have right over No 1 between Moscow and Berlin*

This order gives to regular trains receiving it the right over the train named in the order, and the latter must clear the schedule times of all regular trains, as if it were an extra.



## FORM G. EXTRA TRAINS.

— will run extra — to —,  
 — will run extra — to — and return

## EXAMPLES.

*will run extra Berber to Gaza.*

*will run extra Berber to Gaza and return to Cabul.*

receiving this order is not required to protect  
 ist opposing extra trains, unless directed by  
 so, but must keep clear of all regular trains,  
 by rule.

— will run extra leaving — on — as  
 h right over all trains.

—  
 —  
 —

## EXAMPLE.

*will run extra leaving Turin on Thursday Feb 17th  
 17th right over all trains.*

*in 11 30 p m  
 n 12 25 a m  
 ton 1 47 a m  
 e 2 22 a m*

may be varied by specifying the kind of extra  
 articular trains over which the extra shall or  
 ave the right. Trains over which the extra is  
 the right must clear the time of the extra —

## FORM H. WORK EXTRA.

extra — will work — until — between  
 —

## EXAMPLES.

*extra 292 will work 7 a m until 6 p m between Berne*

ing limits should be as short as practicable, to  
 as the progress of the work may require. The  
 be combined, thus:

*extra 292 will run Berne to Turin and work 7 a m  
 between Turin and Rome.*

## FORM E. TIME ORDERS.

- (1.) — will run — late — to —.  
 (2.) — will run — late — to — and — late  
 to — etc.  
 (3.) — will wait at — until — for —.

## EXAMPLES.

- (1.) *No 1 will run 20 min late Joppa to Mainz.*  
 (2.) *No 1 will run 20 min late Joppa to Mainz and 15 min late Mainz to Muscat etc.*  
 (3.) *No 1 will wait at Muscat until 10 a m for No 2.*

(1) and (2) make the schedule time of the train named, between the stations mentioned, as much later as stated in the order, and any other train receiving the order is required to run with respect to this later time, as before required to run with respect to the regular schedule time. The time in the order should be such as can be easily added to the schedule time.

Under (3) the train first named must not pass the designated station before the time given, unless the other train has arrived. The train last named is required to run with respect to the time specified, as before required to run with respect to the regular schedule time of the train first named.

## FORM F. FOR SECTIONS.

— will display signals — to — for —.

## EXAMPLES.

*Eng 20 will display signals and run as 1st No 1 London to Paris.*

*No 1 will display signals London to Dover for Eng 85.*

*2d No 1 will display signals London to Dover for Eng 90.*

This form may be modified as follows:

*Engs 70 85 and 90 will run as 1st 2d and 3d No 1.*

*Engs 70 85 and 90 will run as 1st 2d and 3d No 1 London to Dover.*

Under these examples the engine last named will not display signals.

For annulling a section:

*Eng 85 is annulled as 2d No 1 from Chatham.*

If there are other sections following add:

*Following sections will change numbers accordingly.*

The character of a train for which signals are displayed may be stated. Each section affected by the order must have copies, and must arrange signals accordingly.

## FORM G. EXTRA TRAINS.

- (1.) Eng — will run extra — to —.  
 (2.) Eng — will run extra — to — and return to —.

## EXAMPLES.

- (1.) Eng 99 will run extra Berber to Gqza.  
 (2.) Eng 99 will run extra Berber to Gaza and return to Cabul.

A train receiving this order is not required to protect itself against opposing extra trains, unless directed by order to do so, but must keep clear of all regular trains, as required by rule.

- (3.) Eng — will run extra leaving — on — as follows with right over all trains.

Leave —.  
 " —.  
 Arrive —.

## EXAMPLE.

- (3.) Eng 77 will run extra leaving Turin on Thursday Feb 17th as follows with right over all trains.

Leave Turin 11 30 p m  
 " Pekin 12 25 a m  
 " Canton 1 47 a m  
 Arrive Rome 2 22 a m

This order may be varied by specifying the kind of extra and the particular trains over which the extra shall or shall not have the right. Trains over which the extra is thus given the right must clear the time of the extra — minutes.

## FORM H. WORK EXTRA.

- (1.) Work extra — will work — until — between — and —.

## EXAMPLES.

- (1.) Work extra 292 will work 7 a m until 6 p m between Berne and Turin.

The working limits should be as short as practicable, to be changed as the progress of the work may require. The above may be combined, thus:

- (a.) Work extra 292 will run Berne to Turin and work 7 a m until 6 p m between Turin and Rome.

When an order has been given to "work" between designated points, no other extra shall be authorized to run over that part of the track without provision for passing the work extra.

When it is anticipated that a work extra may be where it cannot be reached for orders, it may be directed to report for orders at a given time and place, or an order may be given that it shall clear the track for (or protect itself after a certain hour against) a designated extra by adding to (1) the following words:

*(b.) And will keep clear of (or protect against) Extra 223 South between Antwerp and Brussels after 2 10 p m.*

In this case, Extra 223 must not pass the northernmost point before 2 10 p. m., at which time the work extra must be out of the way, or protected (as the order may require), between those points.

When the movement of an extra over the working limits cannot be anticipated by these or other orders to the work extra, an order must be given to such extra to protect itself against the work extra, in the following form:

*(c.) Extra 76 will protect against work extra 95 between Lyons and Paris.*

This may be added to the order to run extra.

A work extra when met or overtaken by an extra must allow it to pass.

When it is desirable that a work extra shall at all times protect itself while on working limits, it may be done by adding to (1) the following words:

*(d.) protecting itself.*

A train receiving this order must, whether standing or moving, protect itself within the working limits in both directions in the manner prescribed by Rule 99.

Whenever an extra is given orders to run over working limits it must at the same time be given a copy of the order sent to the work extra.

To enable a work extra to work upon the time of a regular train, the following form may be used:

*(e.) Work extra 292 will protect against No 55 between Berns and Turin.*

A train receiving this order will work upon the time of the train mentioned in the order, and protect itself against it as prescribed by Rule 99.

The regular train receiving this order must run, expecting to find the work extra protecting itself within the limits named.

## FORM J. HOLDING ORDER.

Hold — at —.

## EXAMPLES.

- (1.) *Hold No 2 at Berlin.*  
 (2.) *Hold all eastbound trains at Berlin.*

This order will be addressed to the operator and acknowledged in the usual manner. It must be respected by conductors and enginemen of trains thereby directed to be held as if addressed to them.

When a train has been so held it must not proceed until the order to hold is annulled, or an order given to the operator in the form:

"— may go."

Form J will only be used when necessary to hold trains until orders can be given, or in case of emergency.

## FORM K. ANNULLING A REGULAR TRAIN.

- (1.) — of — is annulled — to —.  
 (2.) — due to leave — — is annulled — to —.

## EXAMPLES.

- (1.) *No 1 of Feb 29th is annulled Alaska to Halifax.*  
 (2.) *No 3 due to leave Naples Saturday Feb 29th is annulled Alaska to Halifax.*

The train annulled loses both right and class between the stations named and must not be restored under its original number between those stations.

## FORM L. ANNULLING AN ORDER.

"Order No — is annulled."

If an order which is to be annulled has not been delivered to a train, the annulling order will be addressed to the operator, who will destroy all copies of the order annulled but his own, and write on that:

*Annulled by Order No —.*

## EXAMPLE.

*Order No 10 is annulled.*

An order which has been annulled must not be reissued under its original number.

In the address of an order annulling another order, the train first named must be that to which right was given by the order annulled, and when the order is not transmitted simultaneously to all concerned, it must be first sent to the point at which that train is to receive it and the required response made, before the order is sent for other trains.

## FORM M. ANNULLING PART OF AN ORDER.

That part of Order No — reading — is annulled.

## EXAMPLE.

*That part of Order No 10 reading No 1 will meet No 2 at Sparta is annulled.*

In the address of an order annulling a part of an order, the train first named must be that to which right was given by the part annulled, and when the order is not transmitted simultaneously to all concerned, it must be first sent to the point at which that train is to receive it, and the required response made, before the order is sent for other trains.

## FORM P. SUPERSEDING AN ORDER OR A PART OF AN ORDER.

This order will be given by adding to prescribed forms the words "instead of —."

- (1.) — will meet — at — instead of —.
- (2.) — has right over — — to — instead of —.
- (3.) — will display signals for — — to — instead of —.

## EXAMPLES.

- (1.) *No 1 will meet No 2 at Hong Kong instead of Bombay.*
- (2.) *No 1 has right over No 2 Mecca to Medina instead of Mirbat.*
- (3.) *No 1 will display signals for Eng 85 Astrakhan to Teheran instead of Cabul.*

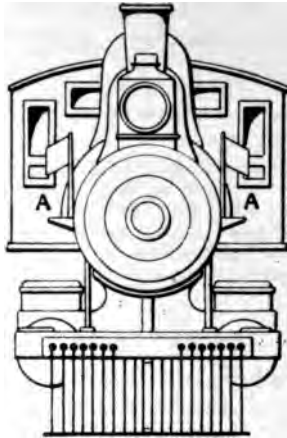
An order which has been superseded must not be re-issued under its original number.

**DIAGRAMS  
OF  
TRAIN SIGNALS.**

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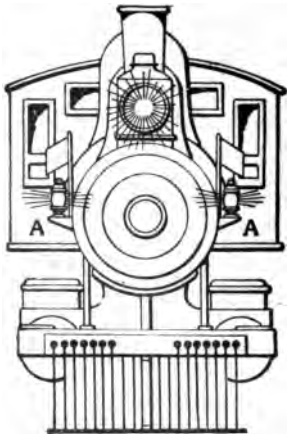
**NOTE.**--The diagrams are intended to illustrate the general location of the train signals, not the exact manner in which they are to be attached.

Combination lamps with four illuminated colored faces are represented in the diagrams.



**Engine running forward by day  
as an extra train.**

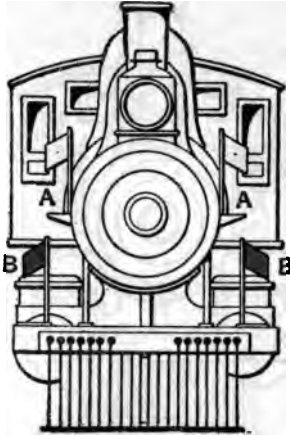
White flags at A A. See Rule 21.



**Engine running forward by night  
as an extra train.**

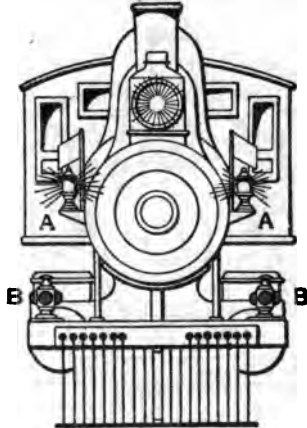
White lights and white flags at A. A.  
See Rule 21.





**Engine running backward by day as an extra train, without cars or at the rear of a train pushing cars.**

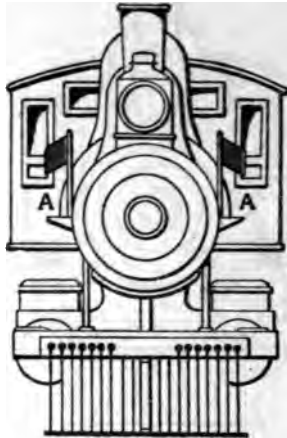
White flags at A A. See Rule 21.  
Green flags at B B, as markers. See Rule 19.



**Engine running backward by night as an extra train, without cars or at the rear of a train pushing cars.**

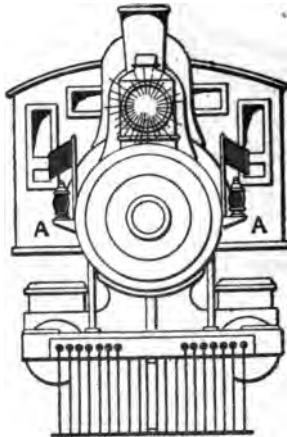
White lights and white flags at A A.  
See Rule 21.

Lights at B B, as markers, showing green at side and in direction engine is moving and red in opposite direction. See Rule 19.



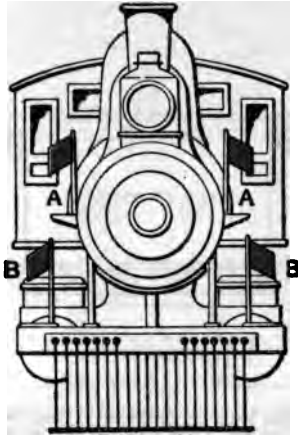
**Engine running forward by day displaying signals for a following section.**

Green flags at A A. See Rule 20.

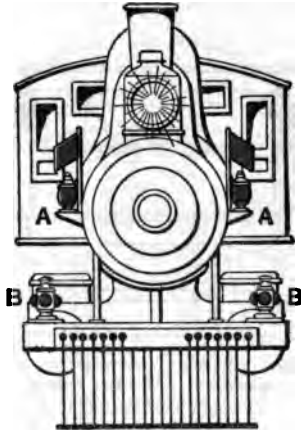


**Engine running forward by night displaying signals for a following section.**

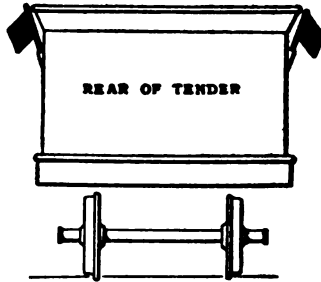
Green lights and green flags at A. A. See Rule 20.



**Engine running backward by day, without cars or at the rear of a train pushing cars, and displaying signals for a following section.**  
 Green flags at A A. See Rule 20.  
 Green flags at B B, as markers. See Rule 19.

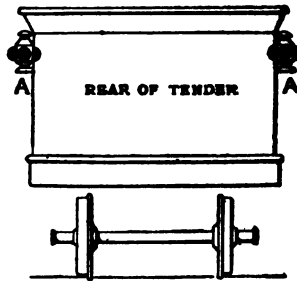


**Engine running backward by night, without cars or at the rear of train pushing cars, and displaying signals for a following section.**  
 Green lights and green flags at A A. See Rule 20.  
 Lights at B B, as markers, showing green at side and in direction engine is moving and red in opposite direction. See Rule 19.



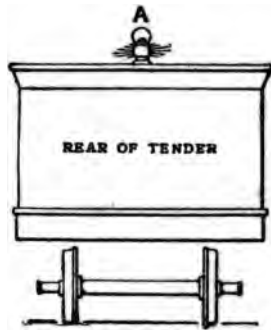
Engine running forward by day, without cars or at the rear of a train pushing cars.

Green flags, as markers. See Rule 19.

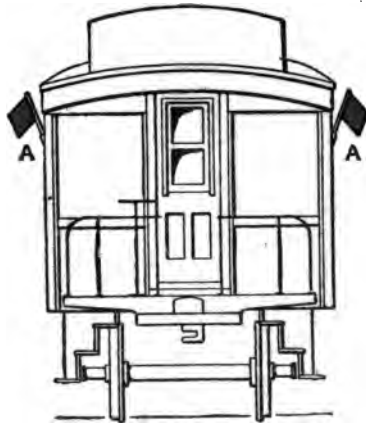


Engine running forward by night, without cars or at the rear of a train pushing cars.

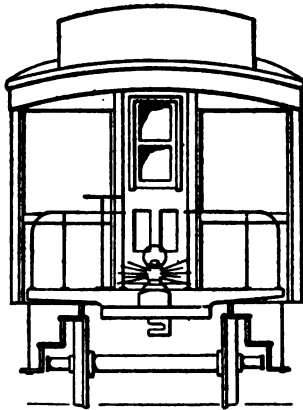
Lights at A A, as markers, showing green to the front and side and red to rear. See Rule 19.



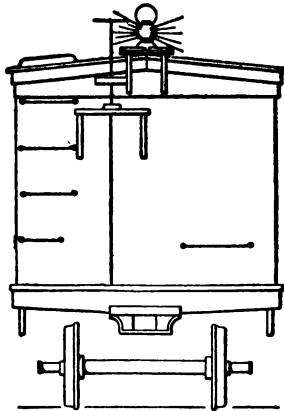
**Engine running backward by night,  
without cars or at the front of  
a train pulling cars.  
White light at A.**



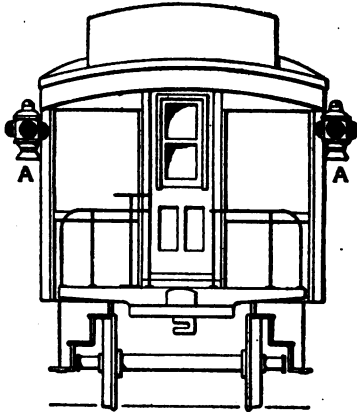
**Rear of train by day.  
Green flags at A A, as markers.  
See Rule 19.**



**Passenger cars being pushed by an engine by night.**  
White light on front of leading car.  
See Rule 24.

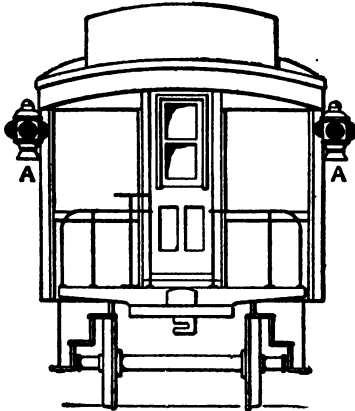


**Freight cars being pushed by an engine by night.**  
White light on front of leading car.  
See Rule 24.



**Rear of train by night while running.**

Lights at A A, as markers, showing green toward engine and side and red to rear. See Rule 19.



**Rear of train by night when on siding to be passed by another train.**

Lights at A A, as markers, showing green toward engine, side and to rear. See Rule 19.

